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PORTUGAL UNIVERSITY INSTITUTES DEVELOPMENT PROJECT

(Contract AID/NE-C-1701)

REPORT ON
SHORT-TERM STAFF ASSIGNMENT

Submitted by
DR. CHARLES L. RHYKERD
Department of Agronomy
Purdue University

June 14 through August 5, 1981

PORTUGAL UNIVERSITY INSTITUTES DEVELOPMENT PROJECT

(AID Contract - AID/NE-C-1701)

REPORT ON

SHORT-TERM STAFF ASSIGNMENT

at the

Instituto Universitario de Tras-os-Montes e Alto Douro
Vila Real, Portugal

and

Universidade de Evora
Evora, Portugal

JUNE 14 - AUGUST 5, 1981

Submitted by

DR. CHARLES L. RHYKERD
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ITINERARY

I was in Portugal from June 14 to August 5, 1981. During that time I presented 7 seminars on various facets of forage establishment, production, and utilization. In addition, I advised doctoral students and consulted with numerous agronomists and animal scientists associated with forage production and utilization. Five weeks of my stay were spent in northern Portugal at the Instituto Universitario de Tras-os-Montes e Alto Douro in Vila Real and two weeks in southern Portugals at the University of Evora in Evora. While in southern Portugal I visited the National Livestock Center at Fonte Boa, the Plant Breeding Station at Elvas, the World Bank Project in Evora, and several University of Evora research farms.

The 4 seminars presented at the Instituto Universitario de Tras-os-Montes e Alto Dourto were:

June 29 (a.m.) -- Establishment of Forage Crops
June 29 (p.m.) -- Soil Fertility Requirements for Production of Forage Crops
June 30 (a.m.) -- Morphological Development of Grasses and Grazing Systems
June 30 (p.m.) -- Harvesting and Storing of Hay and Silage

Two seminars were presented at the University of Evora:

July 10 -- Agronomic Aspects of Forage Production
July 15 -- Grazing Systems, Hay and Silage Production and Research Suggestions

At the National Livetock Center:

July 16 -- Nutritive Value of Forage

ACKNOWLEDGEMENTS

I am especially grateful to Mr. Don Finberg and Mr. Charles Buchanan, Jr., of AID/LISBON and Mr. James Black of the PROCALFER Project in Lisbon. They exhibited a great deal of interest in my work and provided invaluable assistance on several occasions which greatly increased the effectiveness of my assignment.

I am also deeply indebted to the Purdue project coordinators, Jake Atkinson, John Foley, and John Sanders for making the necessary arrangements for me to go to Portugal as well as scheduling my time most efficiently and effectively while in Portugal. While at the University of Evora, John Sanders not only worked out a very detailed itinerary for the 2-week period but also tolerated me as a boarder in his home which added greatly to the pleasantness and effectiveness of my tour of duty in Evora. Also, there is no way I can repay my good friend and colleague, Jim Ahlrichs, for providing me a home away from home while in Vila Real as well as opening many doors for me relative to soil-forage-animal studies.

Last, but not least, was the tremendous reception, respect, and cooperation I received from all the Portugese scientists and administrators. They made my stay in Portugal extremely enjoyable and I feel very productive. Special thanks goes to Nuno Moreira for arranging my itinerary, providing transporation, and looking after other details while I was at the Instituto Universitario de Tras-os-Montes e Alto Douro in Vila Real. Also especially helpful at Vila Real were Dr. Fernando Nunes Ferreira Real--Reitor, Dr. Joaquim Lima Pereira--Vice Reitor, Armando

Mascarenhas Ferreira, Fernando Martins, J. Torres Pereira, Ana Luisa Pires and Joao Coutinho. At the University of Evora, I wish to acknowledge the assistance and encouragement of Dr. Ario Lobo Azevedo--Reitor, Dr. Carlos Portas--Pro Reitor, Professor Cruz de Carvalho, Afonso de Almeida, Manual Cancela d'Abreu, Ermelinda Pinheiro, Rosario, Araiyo, and Mario de Carvalho.

I was impressed with the facilities and staff at the National Livestock Center and wish to thank Dr. Joaquim Portugal and his assistant Dr. Pires da Costa for making my visit there so enjoyable.

Dr. David Gomes Crespo, Head of the Forage Crops Department at the National Plant Breeding Station and Dr. Teodosio Salgueiro, Head of Division of Pastures, were generous with their time while discussing problems associated with forage production and utilization in Portugal.

OBSERVATIONS AND RECOMMENDATIONS

Introduction

Due to the urgency of increasing agricultural production in Portugal and the shortage of funds,facilities, and scientists, it is imperative that research priorities be established to develop technology which will resolve the limiting factors in agricultural production as soon as possible. In addition, maximum use should be made of technology already available relative to forage production and utilization. I an confident that ruminant animal performance in Portugal can be increased quite dramatically merely by producing higher quality forage.

The uniqueness of Portugal's problems in establishment, production, and utilization of forages is associated with the climate and soils. the Mediterranean climate produces cool to cold wet winters and hot, dry summers with rainfall being considerably less in southern Portugal than northern Portugal. Thus crops must be produced during a relatively short and cool growing season which greatly restricts the forage species which can be grown without irrigation.

I recommend that a forage specialist from Portugal who has a real appreciation for the soil-plant-animal complex spend at least 6 months in Australia studying forage production and utilization under Australian conditions. One must thoroughly understand the climatic and soil conditions of Australia as compared to Portugal. If I am not mistaken, the soils of some of the other areas of the world that have a Mediterranean

climate are not acid and low in fertility, at least to the degree, as the soils in Portugal. I am confident that the acid, low fertility soils of Portugal account for the major portion of the many problems encountered in the establishment, production, and utilization of forages in Portugal as compared to Australia and California.

The improvement of ruminant animal agriculture in Portugal is dependent upon thoroughly understanding the system which included soils, plants (grasses and legumes), and animals. This system is very complex and highly interrelated. Forage production is dependent upon the soils and the climate while ruminant animal performance is dependent upon quantity and quality of forage. Soil, plant, and animal researchers must understand the interdisciplinary nature of their research and cooperate whenever possible to maximize the usefulness of their research findings in order to resolve Portugal's ruminant animal agriculture problems.

I found very capable soil scientists and animal nutritionists at the universities and research stations visited but very few forage specialists. Professor Nuno Moreira, at the Instituto Universitario de Tras-os-Montes e Alto Douro, is an outstanding young scientist. The University of Evora is in the process of training a forage specialist and their animal nutritionists, especially Afonso de Almeida, have a very good appreciation of forage production and quality. I would highly recommend at least one forage specialist on the staff at the National Livestock Center.

One specialist I did not encounter in Portugal was a sheep and/or goat management specialist. Scientists appeared to be specialized in the areas of nutrition, physiology, breeding, etc. A professor in the area of sheep management could offer a course at the university, provide information to extension personnel and farmers, and conduct research and be in a good position to coordinate all the various disciplines involved in sheep and/or goat management.

Soils

The soils, in general, tend to be acid and relatively low in fertility. Thus, these soil problems along with the climatic limitations further restrict the forage species which can be grown without considerable investment in lime and fertilizer. The poor soil conditions and the short growing season cause the forage yields to be very low. The problems and costs involved in the use of lime stresses the importance of using acid tolerant species and varieties on the strongly acid soils, especially those high in aluminum. From my short stay in Portugal, the major forage problems both on the very small farms of northern Portugal and the very large farms of southern Portugal appeared to be very low forage yields and, for much of the year, very low forage quality. These two factors result in very low animal performance.

Extensive liming and fertilizer trials are needed to determine the macro and micronutrient deficiencies. I strongly recommend the use of plant analyses along with soil test results in this research to determine the mineral elements limiting forage (or grain) production. These data relative to foliar mineral analyses would also be extremely useful to animal nutritionists since many animal health problems are related to mineral deficiencies or imbalance in the ration.

With the high cost of lime and fertilizer, more attention needs to be devoted to efficiency of utilization. The problems and costs involved in the use of lime certainly points out the merits of the use of acid tolerant species and strains on these highly acid soils.

Since Al toxicity is frequently a problem with some of these acid soils, I think it would be beneficial to screen various forage species, especially legumes, relative to their tolerance to Al. This study could be conducted in a greenhouse which could simplify the experiment. The study should include native and introduced species such as the subterranean clovers and other annual clovers, medics, serradella, vetches, birdsfoot trefoil, etc.

Availability of P is extremely important in establishing legumes as well as soil pH. Experiments are needed to study band application of P and lime directly below the legume seeds. This band would be immediately available to the taproot, reduce fixtion of P in the soil, and therby reduce the amount of P, and possible lime, needed to produce high yields of legumes on acid soils low in P.

Although the soils are not as deficient in K as P, K fertilization should not be overlooked when attempting to produce high forage yields since forages remove large amounts of K. The concentration of K in forage will probably vary from 1.5 to 4.0% on a dry matter basis. Low soil K is frequently the reason legumes do not persist in a mixture with grasses.

Deficiencies of Mg can cause problems both with plants and animals. Plant mineral analyses will quickly identify such deficiencies. Legumes tend to be higher in Mg, as well as Ca, than grasses. Consequently, animal problems, such as grass tetany, may be avoided by including legumes in the mixture with grasses.

Numerous N fertilization studies are needed because of the extensive native pastures, which are predominately grass, as well as the improved grass pastures. Many soils are very low in organic matter and therefore the N supplying power of the soil is most likely very low. Because of the many adverse conditions including the very cool temperatures during part of the rainy season it may be that a N response will be found with legumes. When conducting N fertilization studies, care must be taken to insure that other nutrient elements are not limiting as N fertilization will greatly increase the uptake of other elements. Also, most of the N fertilizers will have an acidifying effect on the soil although the magnitude of the effect should not be large. The N studies should be designed so that the economic return for farmers can be calculated.

Forage Species

Due to the high cost of fossil energy and lack of irrigation water, it is essential that research be directed toward maximizing yield of forage crops during the rainy season. An intensive investigation should be made in Portugal, probably at a minimum of two locations, to study cool-season grasses and legumes relative to their establishment and productivity under these soil and climatic conditions. I think it would be important to test varieties of as widely different soil and climatic adaptations as possible within certain species such as annual *Trifolium* and *Medicago*, *Vicia*, *Lotus*. etc.

It should be kept in mind during this screening process that there may be several different uses of the same species. This may require varieties of the same speices with widely different characteristics for use as winter

pasture, spring or early summer hay production, adding organic matter, reseeding varieties, etc. Observations should be made over several years because of year to year variations in temperature, rainfall, etc.

Subterranean clover has the potential of becoming an extremely valuable forage legume. However, extensive testing is needed to evaluate present varieties (mostly imported) as well as to develop varieties which would be better adapted to conditions in Portugal. Since it is a winter annual, reseeding varieties are needed for use in permanent pastures.

In addition to varietal development, numerous management studies are needed with sub clover relative to soil requirements (liming, fertilization including placement, Al tolerance, inoculation), best grass to grow in association with sub clover, grazing management for maximum animal performance as well as persistance of the sub clover. Research is also needed concerning commercial seed production since essentially all seed is imported. The development of adapted varieties for Portugal as well as developing a seed industry should greatly increase the yield and quality of forage produced and thereby increase animal production while reducing the need for feed grain (much of which is imported).

Another potentially very valuable use of sub clover as well as other legumes is for interseeding in small grains for the purpose of supplying N and organic matter to the soil. With sufficient growth, the legume can greatly increase the quality of the straw which is commonly used to feed

ruminant animals following the harvest of grain. The presence of a significant portion of legume in the straw may increase the quality to the point that it might be a maintenance ration for ruminants thereby preventing weight loss during the long, dry summers.

Forage Quality

Much of the pasture land in Portugal is composed of what is referred to as native species--most of which are grasses. From what I was told, these species vary widely and often the species included in the pastures are not known. This was especially the case in the Alentejo Region. Even if these were desirable species, the variety of species in a pasture makes it very difficult to manage because of the range in palatability, maturity, etc.

Since this type pasture is very common, research is needed to improve the yield and quality of forage. The native species should be identified, the response to lime and fertilizer (including N) should be evaluated, and further studies should be conducted to renovate the pastures through the introduction of one or more legumes. The soil and climatic conditions of the region will determine the best legumes to seed. Further studies will be needed to determine the management practices necessary to maintain the species over a period of years.

Conditions vary widely in Portugal making generalizations difficult. However, it is apparent that grain crops will be grown on the most productive soils with forages being grown on the more rolling and less productive soils. With proper management these less productive soils can be made to produce high yields of high quality forage while reducing soil erosion to near zero.

I believe much can be done to improve the yield and quality of forage based on technology already available. Yield of forage must be maximized during the short favorable growing season with forage species requiring a minimum of inputs. Also, much greater emphasis must be placed on conserving high quality forage, especially hay. Too much straw is being fed to ruminants during the long dry period without proper supplementation resulting in low milk production, loss of weight, and low conception rates.

Time of cutting has a very profound effect on forage quality. My observations indicated that most, if not all, forages were harvested much too mature resulting in low crude protein concentration and low digestibility. The reason I most frequently heard for the late cutting was that they waited until the end of the rainy season so that they could make hay. Most likely early cut rained on hay would be higher quality than the hay that is presently being made. Also, taking a cutting of hay before the end of the rainy season would permit the regrowth of higher quality forage for grazing in the dry season. I saw several large round balers which greatly speed up the haymaking process. The following table shows the rapid change in crude protein and total digestible nutrients as alfalfa matures. Similar changes in crude protein concentration and total digestible nutrients would be expected with the species of forage crops in Portugal.

Maturity	Crude Protein	Total Digestible Nutrients
	----------%	----------
Pre-bud	21.7	65
Bud	19.9	62
1/10 Bloom	17.2	58
1/2 Bloom	16.0	56
Full Bloom	15.0	54
Mature	13.6	52

The making of silage should be considered where frequent rains prevent the farmer from cutting his forage at the proper time to insure high quality hay. Although silage making is generally considered more expensive than haymaking, it may be justified where high quality forage is necessary for milk cows, sheep, or goats. This is especially true during the long, hot summer when milk production tends to drop rather drastically. High quality silage, or hay, will help maintain a high level of milk production over the summer period when pastures are dormant.

Hay Grading Standards

The establishment of hay standards to be promoted by agricultural extension personnel would not require a large input of staff or money. My recommendation is that the program be kept simple in order to be easily understood and readily implemented. The program will point out the importance of high quality forage in animal production and minimize the need for supplementation with expensive protein and grain.

Although many laboratory analyses are often run to determine 5 to 6, or more, grades of forage, I suggest the establishment of only 3 grades of hay based on only 2 laboratory analyses--crude protein and *In Vitro* dry matter disappearance (IVDMD) as shown in the following table. Actually only a crude protein determination gives an excellent indication of forage quality. However, the IVDMD will be very valuable in demonstrating to the farmer the quality of his forage.

Proposed Hay Grading Standards

	Hay Grade		
Lab Test	Low	Medium	High
---------- % ----------			
Crude protein *	< 8	9 - 14	> 14
Digestibility **	< 40	40 - 55	> 55

* based in Kjeldahl N x 6.25

** *In Vitro* dry matter disappearance can be used to estimate digestibility recognizing that *In Vitro* DMD values may not always agree 100 percent with *In vivo* values.

Soil testing laboratories could be equipped to run these tests. The *In Vitro* DMD test requires a rumen fistulated animal.

Stockpiling

Various forage crops should be evaluated relative to their ability to retain their forage quality when left standing in the field after maturing (stockpiling). Data should be obtained relative to yield, crude protein, and digestibility.

Many legumes are not suited for this purpose since they lose their leaves upon drying. Therefore, legumes should be selected for their ability to retain their leaves after maturing and standing in the field into the dry season.

Growth regulators (see following reprint on mefluidide from page 7 of the 1982 Proceeding of Amer. Forage & Grassland Council) may be useful in delaying the maturity of forages and thereby maintain higher quality into the dry season. However, I believe it may be preferable to select earlier maturing varieties (or species), harvest or graze by early heading, and still have sufficient time for considerable growth before the rainy season ends. Cool season grasses head out only once and therefore this regrowth will be only vegetative material of at least reasonably high quality. Also, the regrowth of non-jointing grasses such as orchardgrass (*Dactylis glomerata*) or tall fescue

(*Festuca arundinacea*) will be composed only of leaves resulting in high quality forage.

USE OF MEFLUIDIDE (MBR 12325) TO ENHANCE THE QUALITY OF FORAGE AND SILAGE SPECIES

T. P. Sullivan and T. G. Hargroder
Agricultural Products/3M
St. Paul, Minnesota 55144

Crop quality improvement of tall fescue (Festuca arundinacea Shreb. "Ky 31") - treated with the plant growth regulator mefluidide (N-[2,4-dimethyl-5[[(trifluromethyl) sulfonyl] amino] phenyl] acetamide) has been reported earlier by University of Kentucky investigators. Quality was enhanced by increasing crude protein and total sugar content with a corresponding decrease in cellulose content. This improvement in the quality of tall fescue resulted in significantly increased animal weight gains. Field tests were also initiated to study the effects of mefluidide on quality enhancement of additional forage species such as sorghum-sudan hybrids, pearl millet (Pennisetum americanum) and wheat (Triticum aestivum).

The sorghum-sudan hybrid 88F (Funks) when treated with mefluidide at rates ranging from 0.07-0.56 kg active ingredient per hectare at two stages of development resulted in decreased fiber, increased crude protein and total digestible nutrients at all rates and times of application. Dry matter yields were reduced at all rates. However, regrowth after cutting was significantly increased when compared to untreated plants.

Similar studies have been conducted with pearl millet, another important forage species. Early results have shown decreased fiber, increased crude protein and increased total digestible nutrients at all rates of mefluidide applied to pearl millet measuring 20-30 cm. in height. Preliminary data indicate similar results when mefluidide is also applied at a later stage of development (pre boot). A reduction in dry matter yield compared to untreated plants occurred at all rates of mefluidide followed by a significant stimulation in regrowth after cutting compared to plants not treated with mefluidide.

Mefluidide applied to wheat at rates ranging from 0.07-0.28 kg active ingredient/ha during the early elongation stage resulted in decreased fiber content, increased total digestible nutrients, and decreased dry matter yield. Dry matter yield of leaf tissue increased in relation to dry matter yield of stem tissue as rates of mefluidide increased from 0.07 to 0.28 kg active ingredient/ha when compared to untreated plants. Application of mefluidide to wheat during early elongation up to the boot stage resulted in higher quality to be sustained for a longer period of time. This high quality maintenance has potential for grazing or silage situations and the more rapid regrowth of test plants after cutting may show potential for increased grain production.

Although the above results are preliminary, these data suggest that mefluidide may be an effective plant growth regulator for the enhancement of forage quality in several species.

Grazing Trials

There were several grazing trials being conducted at Evora, Elvas, and possibly another location or two. These experiments had been underway for several years (3-4), the species in the pasture had changed drastically over this period with few if any legumes remaining, and the hay used for supplementation was of very low quality. Grazing trials require large amounts of funds, land, and labor in proportion to the value of the data obtained. My opinion is that plot experiments involving the best adapted forage species, varieties, lime and fertilizer, cutting management, pasture renovation, etc. along with forage quality measurements would be much more beneficial at the present time in order to increase ruminant animal production in Portugal. More information is needed relative to introducing and keeping the most desirable legumes in the pastures before attempting to conduct expensive grazing trials.

A Grazing Management Conference will be held in the United States on the Texas A & M University Campus, November 10-12, 1982. Conference objectives are to:

1) Examine previous grazing management concepts relative to current methods of grazing management research and its practical application.

2) Enchance awareness of current grazing management research.

3) Discuss future approaches for grazing management research, development, transfer and application.

4) Examine relative effectiveness and efficiency of technical information transfer from research and development to practical application of grazing management technology.

Conference participants will include scientists, agency personnel, extension specialists and ranchers. Anyone interested in attending this Conference should write to Dr. David D. Briske, Department of Range Management, Texas A & M University, College Station, Texas 77843. The phone number is 713-845-7331.

Symbiotic N Fixation

There is some question in my mind concerning the capacity of many of the legumes to fix atmospheric nitrogen. It is my understanding that the vetches, *Vicia* spp., are not inoculated at the time of seeding. The assumption is that the legume is native to Portugal and therefore the proper Rhizobia are already present in the soil. The yields of *Vicia* spp. are low which may be due to a lack of inoculation. It may be that effective Rhizobia are not surviving due to the fact that many of the soils are quite acid, high in aluminum, and possibly deficient in Mo, along with adverse weather conditions brought on by the long, hot dry summer. I believe some studies concerning this problem would be very informative as nitrogen certainly is a deficient element in these low organic matter soils.

Mineral Concentrations in Plants

Many mineral problems supposedly exist in Portugal both with respect to forage crops and grazing animals. Mineral deficiencies exist in many soils as well as toxicities due to the increased concentration in the soil solution of certain elements such as Al, Mn, and Fe which is brought about by the highly acid conditions.

The concentration of mineral elements in forage is important for both plant and animal health. A number of factors, in addition to forage species, affect the concentraton of elements in plants. The concentration of these elements in plants, along with soil tests, are extremely valuable in diagnosing soil mineral deficiencies and/or toxicities. In addition, since many grazing animals' ration is composed largely or entirely of forage, knowing the mineral requirements of the animal along with the mineral levels in the forage allows one to determine whether mineral problems exist and what mineral supplementation may be necessary. Also, legumes tend to be higher than grasses in certain minerals which animals require such as Ca and Mg and thus if included in a pasture or hay mixture can tend to avoid or reduce animal health problems (e.g., grass tetany) associated with these minerals.

Plant samples obtained from cooperating scientists at several locations in Portugal were brought back to Purdue University for spectrographic analysis. These data represent a wide variety of crops and show tremendous ranges in concentrations of many mineral elements and should prove to be very valuable to both agronomists and animal scientists for diagnosing soil and animal deficiencies or toxicities.
Unfortunately, I was not able to have the samples analyzed for Mo. However, I recently found a lab which has a reliable procedure for Mo so if someone needs this analysis, please let me know.

These data should be considered as unpublished data. If they so desire, I strongly urge the scientists that provided these plant samples to publish their data in appropriate journals or research bulletins since there is a dearth of plant mineral data in Portugal. In addition, the scientists should consider publishing all of these data jointly in a book or research bulletin so that the data would be available to all plant and soil scientists in Portugal. If possible, soil test results from the plots or fields where these plant samples were obtained would be extremely useful in interpreting the results.

Forage Seed Technology

It appears to me to be unnecessary for Portugal to be importing nearly all their forage seed. In the U. S., the production of forage seed is concentrated in the region of the U. S, which has a Mediterranean climate which is the climate of Portugal. Portugal must develop expertise in the area of seed technology but this should not take long or present any major problems.

The National Plant Breeding Station at Elvas had adequate land, facilities, and possibly sufficient staff to do much of the selection work for the best adapted forage species and varieties. A substation should be established in northern Portugal, possibly at Vila Real, for selecting varieties for northern Portugal since considerable differences exist between the climate of Elvas and northern Portugal.

Scientific and Extension Type Literature

There definitely is a dearth of information available to agricultural workers and farmers. Greater emphasis should be given to the writing of more "how to" bulletins by university and extension personnel. Bulletins

are needed relative to the best forage species and varieties presently available, proper seeding techniques, liming and fertilizing, cutting and grazing management, forage conservation, hay standards, etc. I would strongly recommend writing these bulletins immediatley with the information presently available and then revise or update as new technology becomes available.

In addition, more emphasis should be given to publishing valid research results in scientific journals. Unfortunatley, few agricultural research journals are available in Portugal and consideration should be given to the formation of new organizations for publishing agricultural research data. I was pleased to learn that the Portuguese Pasture and Forage Society was organized within the past two years and is publishing a proceedings of their annual meeting. This will be an excellent organization for the presentation of forage and forage-animal research and for scientists to exchange ideas.

The formation of a Portuguese Academy of Science would be beneficial to all scientists of Portugal. This would provide a scientific organization of much broader scope than the Portuguese Pasture and Forage Society.

I am also recommending the publication of a book on forage production and utilization in Portugal. My recommendation would be to designate an editor and staff of 3-4 of the leading forage-animal scientists in Portugal. These individuals would determine the chapter titles and select authors of the chapters. An expert in each of the areas of the various chapters would be requested to prepare that chapter.

This should enable the book to be published within 2 years. The success of this book will be dependent upon the selection of authors that are not only authorities in their field but also capable of completing the writing of the chapter on schedule.

This book should emphasize the practical application of soil-forage-animal research in order to be of maximum benefit to agricultural extension workers, employees of agricultural agencies, farm managers, and farm operators. I suggest the first section of the book be directed toward the soils and climate of Portugal. Emphasis would be placed on these two factors relative to forage production and utilization and not be written for climatologists or soil scientists. The second section of the book would be devoted to forage production including establishment, weed control, liming and fertilizing, and physiological and morphological aspects of forage management. The third and final section would discuss utilization of forages as pasture, hay, and silage.

Maximum use should be made of present forage production and utilization journals and especially Herbage Abstracts. Herbage Abstracts should be available in all agricultural universities and federal agricultural research centers where soil-forage-animal research is being conducted. This journal has abstracts of forage-animal research world-wide and will prove to be extremely valuable to researchers relative to research already conducted as well as research techniques.

National Livestock Center

I was very much impressed with the staff and facilities at the National Livestock Center. Although they have excellent facilities for basic research, it is imperative at this time that their major research effort be devoted to applied research problems thereby resulting in immediate increases in agricultural production. They need to stress "understanding the system"--soil-forage-animal and the interrelationships. Emphasis should be on the production and utilization of high quality forage. A twelve-month forage program must be developed hopefully with the assistance of the National Plant Breeding Station and the University of Evora. Also, this would provide an excellent opportunity to demonstrate the importance of nutrition to animal health.

Administrative Comments

A serious handicap to the accomplishment of the objectives of this project is the very heavy work load of the university professors. Their first obligation is the teaching of their courses, the second is the work required for their doctoral degree which they must earn within a few years, and the other priority is conducting research. It appeared to me that the professors who remain in Portugal to work on their doctorals are not being given adequate time off to devote to their doctoral research whereas those professors going abroad to study are given 3-4 years, or more, for the M.S. amd Ph.D. degrees.

There is a definite need for more long-term U.S. scientists to work with the university professors as well as federal agricultural research workers. Dr. J. L. Ahlrichs, a soil scientist at Vila Real, is doing an

outstanding job working with colleagues at Vila Real as well as soil scientists throughout Portugal. It is difficult on a short-term assignment to quickly become acquainted with scientists in his area of expertise, identify the major problems, and initiate experiments or recommend solutions. This is particularly true in an area such as the soil-forage-animal complex. Some of the other areas where U.S. scientists would be beneficial are cropping systems and/or conservation tillage (especially at Evora), forage legume and grass breeding including seed production technology, agricultural engineering, sheep and goat management specialist, and possibly a horticulturalist or forester due to the economic importance of these areas also.

I was pleased to be a part of this project. I was very favorable impressed with all phases of the project and believe that the project is operating very smoothly and effectively. However, it is apparent that more than 4 years will be required in order to fulfill the objectives of the project. This is certainly insufficient time for the Portuguese university professors to obtain their doctoral degrees and initiate productive research programs. It would appear to me that it will be necessary to extend the project for at least 2 years.

During my many discussions in Portugal, I frequently heard of other projects, such as the PROCALFER Project and World Bank, with objectives somewhat similar to this project. I believe it would be valuable to those working in Portugal to know all the projects that have been implemented along with their objectives in order to encourage cooperation and avoid unnecessary duplication.

One final comment, the administrators and staff members of the institutions I visited are to be commended for the very efficient use they have made of their limited facilities, land, and human resources.

APPENDIX

Mineral Analyses of Plant Samples

Corn Hybrid LG 15

Armando - Corn Samples for Mineral Analysis

Sample Number	Sample ID	
1	Whole Plant	- Veg Stage (50 cm tall) - Rep 1
2		Veg Stage (50 cm tall) - Rep 2
3		Flowering Stage-Female Flower - Rep 1
4		Flowering Stage-Female Flower - Rep 2
5		Flowering Stage-Male Flower - Rep 1
6		Flowering Stage-Male Flower - Rep 2
7		Milk Stage - Rep 1
8		Milk Stage - Rep 2
9	Ears	- Milk Stage - Rep 1
10		Milk State - Rep 2
11	Stems	- Veg Stage (50 cm tall) - Rep 1
12		Veg Stage (50 cm tall) - Rep 2
13		Flowering Stage-Female Flower - Rep 1
14		Flowering Stage-Female Flower - Rep 2
15		Flowering Stage-Male Flower - Rep 1
16		Flowering Stage-Male Flower - Rep 2
17		Milk Stage - Rep 1
18		Milk Stage - Rep 2
19	Leaves	- Veg Stage (50 cm tall) - Rep 1
20		Veg Stage (50 cm tall) - Rep 2
21		Flowering Stage-Female Flower - Rep 1
22		Flowering Stage-Female Flower - Rep 2
23		Flowering Stage-Male Flower - Rep 1
24		Flowering Stage-Male Flower - Rep 2
25		Milk Stage - Rep 1
26		Milk Stage - Rep 2

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 060 RHYSERD DR C.E. - 208/08 CUSTOMER ARMSTRONG LAWRENCE

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	MN	FE	CU	ZN	%S	B	%NA	AL	BA	SAMPLE WT
						--PARTS PER MILLION---					PPM		PPM	PPM	
	0.00	0.43	3.15	0.58	0.31	75	260	3	47	0.00	7	0.01	322	25	1.00

LAB ID R-5040-02
LOG-IN 12/10/81
COMPLETED 01/28/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 0[illegible] RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO [illegible] SHOLT PLN

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.33	2.37	0.54	0.41	77	240	8	53	0.00	7	0.01	298	35	1.00

LAB ID 82-5070-03
LOG-IN 12/10/81
COMPLETED 01/28/82

2

---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 050 (HYKE 25 DR C L - PORDUE

CUSTOMER ARMANDO L ANDLE PLN

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	MN (PARTS PER MILLION)	FE (PARTS PER MILLION)	CU (PARTS PER MILLION)	ZN (PARTS PER MILLION)	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.28	1.93	0.37	0.21	75	278	5	64	0.00	6	0.01	278	8	1.00

LAB ID 82-5020-04
LOG-IN 12/10/81
COMPLETED 01/28/82

3

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO A WHOLE PLN

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.19	1.18	0.37	0.31	62	322	4*	39	0.00	8	0.01	634*	27	1.00

LAB ID 82-5030-05
LOG-IN 12/10/81
COMPLETED 01/28/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5 PM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	10PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/29/82

ACCOUNT 060 WHYKEY OR C L - DURDUE

CUSTOMER ARMANDO S WHOLE PLU

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	MN	FE	CU	ZN	%S	B	%NA	AL	BA	SAMPLE WT
						--PARTS PER MILLION---					PPM		PPM	PPM	
	0.00	0.28	1.91	0.45	0.24	68	227	6	49	0.00	7	0.01	426	16	1.00

LAB ID B2-5090-06
LOG-IN 12/19/81
COMPLETED 01/29/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 050 INHYKERD DR C L - PURDUE

CUSTOMER ARMANDO S SHOLE PLN

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.24	2.34	0.36	0.30	74	191	5	42	0.00	6	0.01	341	16	1.00

LAB ID 82-5000-07
LOG-IN 12/10/81
COMPLETED 01/28/82

---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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01/28/82

ACCOUNT 050 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO Z ANGEL PEN

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	PARTS PER MILLION MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.19	1.14	0.27	0.19	51	132	36	33	0.00	8	0.01	256	13	1.00

LAB ID 82-5020-08
LOG-IN 1/19/81
COMPLETED 01/28/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PPM	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PPM	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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01/28/82

ACCOUNT 060 RHYKERD DR C E - PURDUE

CUSTOMER ARMANDO 8 WHOLE PLN

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.15	1.03	0.21	0.20	46	90	1*	26	0.00	4*	0.01	190	9	1.00

LAB ID 82-5090-10
LOG-IN 12/10/81
COMPLETED 01/28/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

PAGE

ACCOUNT 950 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO J ARS

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.24	0.72	0.04*	0.11	12	77	1*	29	0.00	1*	0.01	90	1*	1.00

LAB ID 82-5090-11
LOG-IN 12/10/81
COMPLETED 01/28/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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01/28/82

ACCOUNT 050 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO TO FARS

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.28	0.95	0.08	0.14	20	70	2*	32	0.00	2*	0.01	93	4*	1.00

LAB ID 82-0010-12
LOG-IN 12/10/81
COMPLETED 01/28/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO H STEMS

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.33	2.77	0.44	0.31	70	267	7	39	0.00	6	0.01	355	21	1.00

LAB ID 82-5090-13
LOG-IN 12/10/81
COMPLETED 01/28/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO 12 STEMS

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.32	2.61	0.54	0.27	71	332	7	38	0.00	8	0.01	386	21	1.00

LAB ID 82-5020-14
LOG-IN 12/10/81
COMPLETED 01/28/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO L STEMS

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION-- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.17	1.36	0.19	0.18	48	96	2*	36	0.00	3*	0.01	146	11	1.00

LAB ID R2-5090-15
LOG-IN 12/10/81
COMPLETED 01/28/82

13

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT JOJ RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO 14 STEMS

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	MN	FE	CU	ZN	%S	B	%NA	AL	BA	SAMPLE WT
						--PARTS PER MILLION---					PPM		PPM	PPM	
	0.00	0.15	1.00	0.21	0.23	43	120	2*	33	0.00	3*	0.01	202	18	1.00

LAB ID 82-5090-16
LOG-IN 12/10/81
COMPLETED 01/28/82

14

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 960 PHYKEJO DR C L - PURDUE

CUSTOMER ARMANDO DE STEMS

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	MN	FE	CU	ZN	%S	B	%NA	AL	BA	SAMPLE WT
						--PARTS PER MILLION---					PPM		PPM	PPM	
	0.00	0.22	1.58	0.24	0.28	60	206	23	49	0.00	33	0.01	149	15	1.00

LAB ID 82-5070-14
LOG-IN 12/10/81
COMPLETED 01/28/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO 16 STEMS

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.29	2.09	0.29	0.26	49	133	3*	52	0.00	4*	0.01	127	17	1.00

LAB ID 82-5090-19
LOG-IN 12/10/81
COMPLETED 01/28/82

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---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	32PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 050 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO IZ STEMS

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	MN	FE	CU	ZN	%S	B	%NA	AL	BA	SAMPLE WT
						--PARTS PER MILLION---					PPM		PPM	PPM	
	0.00	0.09	0.82	0.22	0.16	51	75	1*	23	0.00	4*	0.01	152	12	1.00

LAB ID 82-5020-20
LOG-IN 12/10/81
COMPLETED 01/23/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO 14 STEMS

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.08	0.57	0.20	0.21	43	67	1*	27	0.00	2*	0.01	103	13	1.00

LAB ID 82-5020-21
LOG-IN 12/10/81
COMPLETED 01/28/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 000 PUYKERD DR C L - PURDUE

CUSTOMER ARMANDO J J LEAVES

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	MN	FE	CU	ZN	%S	B	%NA	AL	BA	SAMPLE WT
						--PARTS PER MILLION---					PPM		PPM	PPM	
	0.00	0.27	3.75	0.64	0.63	91	94	2*	102*	0.00	6	0.01	106	34	1.00

LAB ID 82-5040-22
LOG-IN 12/10/81
COMPLETED 01/28/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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P.O. BOX 207, TERRE HAUTE, INDIANA 47808, (812) 232-0121

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INTERNATIONAL MINERALS & CHEMICAL CORPORATION

January 29, 1982

Mr. C. L. Rhykerd
Agronomy Department
Purdue University
West Lafayette, IN 47907

Dear Dr. Rhykerd:

Here are the results for the remainder of your samples. This set was labeled 1-26, Armando. These samples were analyzed using our ICP-ES. The accuracy limits are the same as those I sent you in my letter of January 20.

We had some equipment problems and used all the material from one sample without getting results. I apologize for this error. The sample was Armando #20-leaves-Rep. 2. Because of this page 20 shows no data.

I have attached a sheet showing the sample numbers correlated with sample descriptions. Rep. #1 is always reported first. Zero values in sulfur and nitrogen columns indicate these analyses were not run.

Please call if you have any questions.

Sincerely,

Michael E. Sevey
Supervisor
IMC Agronomic Services Lab

MES/pc
Encs.

IMC PLANT TISSUE ANALYSIS REPORT
01/28/92

ACCOUNT 060 RUYKERD DR C L - PURDUE

CUSTOMER ARMANDO 20 LEAVES

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0.00	0	0.00	0	0	1.00

LAB ID RP-5090-23
LOG-IN 12/10/91
COMPLETED 01/28/92

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47805

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IMC PLANT TISSUE ANALYSIS REPORT
01/28/82

ACCOUNT 960 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO 21 LEAVES

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.22	2.09	0.52	0.21	88	750*	8	34	0.09	18	0.01	1900*	14	1.00

LAB ID R/-5020-24
LOG-IN 12/10/81
COMPLETED 01/28/82

22

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/12/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO 22 LEAVES

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.18	1.89	0.44	0.30	76	431	6	20	0.00	12	0.01	1210*	10	1.00

LAB ID 82-5091-02
LOG-IN 12/10/81
COMPLETED 01/12/82

23

---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/12/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO 23 LEAVES

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.66	0.61	0.44	105	418	8	37	0.00	15	0.01	1050*	29	1.00

LAB ID 82-5091-03
LOG-IN 12/10/81
COMPLETED 01/12/82

24

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/12/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO 24 LEAVES

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.22	2.06	0.55	0.37	97	361	7	25	0.00	11	0.01	834*	17	1.00

LAB ID 82-5071-04
LOG-IN 12/10/81
COMPLETED 01/12/82

25

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/12/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO 25 LEAVES

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	PARTS PER MILLION MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.18	1.72	0.86	0.32	148	403	7	48	0.00	27	0.01	1200*	19	1.00

LAB ID 82-5091-05
LOG-IN 12/10/81
COMPLETED 01/12/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	'PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
01/12/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ARMANDO 26 LEAVES

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	
	0.00	0.22	1.35	1.00	0.44	167	381	9	48	0.00	30	0.01	1110*	40	1.00	

LAB ID 82-5091-06
LOG-IN 12/10/81
COMPLETED 01/12/82

2

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

RELAÇÃO DAS AMOSTRAS ENVIADAS AO DR. CHARLES RHYCKERD

NUNO MOREIRA - IUTAD - VILA REAL - JULHO 1981

Number of the sample	Experiment	Replication and Treatment	Development stage of the plants	Observ.
397	CUTTING DATE ON OAT x VETCH	R_1 - OAT - 1st DATE	Stem elongation	Cutting date - April, 15
405	"	" " 2nd "	" "	" " - " ,27
416	"	" " 3th "	Boot stage	" " - May, 8
421	"	" " 4th "	Emergence of inflorescence completed	" " - " ,18
429	"	" " 5th "	Caryopsis watery ripe	" " - " ,29
437	"	" " 6th "	Late milk stage	" " - June, 8
404	"	" - VETCH - 1st DATE	Vegetative stage	" " - April, 15
425	"	" - " - 4th "	Beginning of flowering	" " - May, 18
441	"	" - " - 6th "	Beginning of seed formation	" " - June, 8
453	PRODUCTION OF RANDOM MIXTURE	BARLEY - IRAVAT R_1	R_1 milk stage	
457	PLOTS GES WITH ONE CUT	RYE - from TOTALEGRE	R_1 " "	
481	" "	OAT - LAMAS-VELHAS	R_1 " "	
485	" "	TRITICALE - 8f	R_1 " "	
497	" "	OAT - LOSARCOS	R_1 " "	
501	" "	WEAT - BARBELA	R_1 " "	
541	" "	OAT - BOA FÉ R_1	" "	
545	" "	OAT - FLAMO R_1	" "	
473	" "	COMMON VETCH R_1	medium-late flowering	
513	" "	PURPLE VETCH Fontainhas R_1	medium flowering	
539	" "	" " da Lage R_3	" "	
565	" "	HAIRY VETCH Amoreiras R_1	" "	
581	" "	" " Casal R_1	" "	
589	" "	" " Tinas R_1	" "	

Number of the sample	Experiment	Replication and Treatment	Development stage of the plants	Observ.	
573	" "	TANGER PEA Raiano R_1	Medium flowering		
596	PRODUCTION OF PASTURE CULTIVARS	SUB-CLOVER TRIKALLA R_2	Beginning of flowering	Cutting date April, 24	
601	" "	" " SEATON PARK R_4	" " "	" " " "	
606	" "	" " CLARE R_1	" " "	" " " "	
619	" "	WILD ANNUAL REYGRASS WITMOSA R_3	Head stage	" " April, 29	
623	" "	HIBRID REYGRASS MANAWA R_3	" "	" " " "	
700	" "	SUBCLOVER TRIKALLA R_1	Late maturity	" " June, 24	Plants with bad looking
701	" "	" " SEATON PARK R_2	" "	" " " "	"
702	" "	" " HOWARD R_1	" "	" " " "	"
703	" "	" " " R_4	" "	" " " "	"
704	" "	" " WOGONEUP R_3	" "	" " " "	"
705	" "	" " CLARE R_2	" "	" " " "	"
659	" "	SUBCLOVER VINHALS R_2	" "	" " " "	
664	" "	" " TRIKALLA R_2	" "	" " " "	
669	" "	" " SEATON PARK R_4	" "	" " " "	
671	" "	" " HOWARD R_2	" "	" " " "	
~~672~~	~~" "~~	~~" " WOGONEUP R_1~~	~~" "~~	~~" " " "~~	
673	" "	" " CLARE R_1	" "	" " " "	
678	" "	WHITE CLOVER HUIA R_3	Seed development	" " " "	
681	" "	" " LADINO R_3	" "	" " " "	
688	" "	ALFALFA PACANIVO R_1	" "	" " " " Bad looking	
709	" "	WILD ANNUAL REYGRASS WITMOSA R_4	Maturity	" " June, 22	
711	" "	HIBRID REYGRASS MANAWA R_2	2nd cut - regrowth	" " " "	
730	" "	TALL FESCUE DETFETER R_1	" " "	" " " "	
736	" "	" " MANADE R_3	" " "	" " " "	

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 397

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.18	3.03	0.32	0.14	218	67	6	28	0.00	3*	0.01	82	16	1.00

LAB ID 82-5080-14
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 405

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.15	2.26	0.23	0.11	176	44	5	14	0.00	2*	0.01	35	21	1.00

LAB ID 82-5080-15
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

LLEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 416

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.14	1.68	0.26	0.10	108	91	4*	14	0.00	2*	0.01	47	27	1.00

LAB ID 82-5080-16
LOG-IN 12/08/81
COMPLETED 12/18/81

32

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 421

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.12	1.85	0.27	0.12	166	120	4*	19	0.00	2*	0.02	113	25	1.00

LAB ID 82-5080-18
LOG-IN 12/08/81
COMPLETED 12/18/81

33

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 429

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	LAB ID 82-5080-19 LOG-IN 12/08/81 COMPLETED 12/18/81
	0.00	0.09	1.47	0.20	0.11	132	38	2*	14	0.00	2*	0.01	15*	24	1.00	

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.06%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 437

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.13	1.08	0.18	0.13	106	88	3*	16	0.00	2*	0.01	22*	26	1.00

LAB ID 82-5080-20
LOG-IN 12/08/81
COMPLETED 12/18/81

35

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 404

LAB ID 82-6080-21
LOG-IN 12/08/81
COMPLETED 12/18/81

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.34	2.32	1.63	0.20	189	1080*	25	217*	0.00	18	0.04	2100*	67	1.00

36

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 425

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.26	2.53	1.80	0.26	217	236	14	101*	0.00	19	0.02	378	70	1.00

LAB ID 82-5080-22
LOG-IN 12/08/81
COMPLETED 12/18/81

37

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 441

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.22	2.09	1.61	0.27	103	224	13	78	0.00	18	0.01	265	66	1.00

LAB ID 82-5040-23
LOG-IN 12/08/81
COMPLETED 12/15/81

38

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 453

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.19	0.94	0.29	0.10	62	239	5	21	0.00	3*	0.02	63	42	1.00

LAB ID 82-5080-24
LOG-IN 12/08/81
COMPLETED 12/18/81

39

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE CUSTOMER 457

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.15	1.32	0.25	0.08	88	33	4*	24	0.00	2*	0.01	28*	50	1.00

LAB ID 82-5081-02
LOG-IN 12/08/81
COMPLETED 12/18/81

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---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 481

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.12	1.33	0.32	0.09	152	51	3*	19	0.00	2*	0.02	25*	30	1.00

LAB ID 82-5081-03
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE CUSTOMER 485

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.14	1.22	0.72	0.08	128	157	8	28	0.00	2*	0.01	174	31	1.00

LAB ID 82-5081-04
LOG-IN 12/08/81
COMPLETED 12/18/81

---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 PHYKERD DR C - PURDUE

CUSTOMER 497

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.12	0.90	0.33	0.08	64	42	3*	12	0.00	1*	0.05	36	28	1.00

LAB ID 82-5081-05
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	[illegible]
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	[illegible]PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 501

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.09	1.20	0.29	0.08	147	107	3*	19	0.00	2*	0.01	28*	38	1.00

LAB ID 82-5081-06
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYNERD DR C L - PURDUE

CUSTOMER 541

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.11	1.17	0.25	0.09	96	70	2*	11	0.00	2*	0.01	13*	29	1.00

LAB ID 82-5081-07
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 545

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.14	1.44	0.35	0.11	114	76	4*	15	0.00	2*	0.01	12*	41	1.00

LAB ID 82-5081-08
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 473

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.23	1.91	0.70	0.15	115	189	15	76	0.00	12	0.03	189	28	1.00

LAB ID 82-5081-10
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 513

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION-- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.32	2.10	1.33	0.19	118	156	17	104*	0.00	12	0.01	234	53	1.00

LAB ID 82-5081-11
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 PHYKERD DR C L - PURDUE

CUSTOMER 539

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	LAB ID 82-5081-12 LOG-IN 12/08/81 COMPLETED 12/18/81
	0.00	0.23	1.95	0.82	0.13	87	126	11	39	0.00	11	0.02	182	36	1.00	

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE CUSTOMER 565

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.24	1.89	1.33	0.20	87	91	15	89	0.00	14	0.01	166	56	1.00

LAB ID 82-5081-13
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 581

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.35	2.86	0.93	0.22	109	136	23	137*	0.00	13	0.01	110	42	1.00

LAB ID 82-5081-14
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	2' P	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	50UPP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 589

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	2.32	1.07	0.19	89	92	24	147*	0.00	12	0.01	1.38	85	1.00

LAB ID 82-5081-15
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 573

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.21	1.49	1.21	0.14	73	64	25	62	0.00	9	0.01	263	53	1.00

LAB ID 82-5081-16
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY ÷ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 595

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.35	2.45	1.85	0.26	138	419	17	74	0.00	17	0.06	642*	28	1.00

LAB ID 82-5081-18
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 PHYKERD DR C L - PURDUE

CUSTOMER 601

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.23	1.70	1.27	0.23	172	882*	18	71	0.00	11	0.05	2180*	32	1.00

LAB ID 82-5081-19
LOG-IN 12/09/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 606

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.34	1.88	2.02	0.29	137	330	21	76	0.00	15	0.14	463	23	1.00

LAB ID 82-5081-20
LOG-IN 12/08/81
COMPLETED 12/18/81

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---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 619

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	
	0.00	0.18	1.35	0.57	0.10	160	75	6	40	0.00	4*	0.02	114	39	1.00	

LAB ID 82-5081-21
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 623

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.17	1.73	0.62	0.10	145	94	6	32	0.00	4*	0.01	148	37	1.00

LAB ID 82-5081-22
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 700

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.22	2.33	0.25	163	878*	34	104*	0.00	24	0.02	3210*	105*	1.00

LAB ID 82-5081-23
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 701

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.22	1.42	1.54	0.24	151	1390*	26	62	0.00	23	0.04	5160*	71	1.00

LAB ID 82-5081-24
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 702

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.18	1.34	2.30	0.18	182	1130*	39	101*	0.00	24	0.03	4380*	99	1.00

LAB ID 82-5082-02
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 703

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.16	1.46	1.84	0.16	131	1440*	34	59	0.00	22	0.05	5390*	97	1.00

LAB ID 82-5082-03
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 704

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.22	1.43	1.46	0.17	86	1520*	26	46	0.00	23	0.04	5890*	88	1.00

LAB ID 82-5082-04
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 705

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.21	1.39	1.58	0.25	173	1400*	30	104*	0.00	21	0.03	5280*	94	1.00

LAB ID 82-5082-05
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 659

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	PARTS PER MILLION MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.13	1.83	3.33	0.45	199	196	29	77	0.00	14	0.07	311	94	1.00

LAB ID 82-5082-06
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 664

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION-- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.21	1.36	2.16	0.35	192	1950*	32	66	0.00	19	0.05	4530*	113*	1.00

LAB ID 82-5082-07
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RAYKERD DR C L - PURDUE

CUSTOMER 669

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.17	1.37	1.67	0.26	134	989*	26	41	0.00	15	0.07	2800*	62	1.00

LAB ID 82-5082-08
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 671

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.20	1.50	1.83	0.22	102	1960*	22	41	0.00	21	0.02	4730*	57	1.00

LAB ID 82-5082-10
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.0[illegible]	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.0[illegible]	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 673

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.14	1.14	4.09*	0.43	153	181	14	28	0.00	16	0.25	276	58	1.00

LAB ID 82-5082-11
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 PHYKERD DR C L - PURDUE

CUSTOMER 679

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.22	2.07	1.62	0.32	96	621*	11	20	0.00	14	0.03	975*	29	1.00

LAB ID 82-5082-12
LOG-IN 12/08/81
COMPLETED 12/18/81

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---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 681

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.24	2.73	1.63	0.27	76	194	10	22	0.00	15	0.02	279	35	1.00

LAB ID 82-5082-13
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 688

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION-- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.28	1.67	2.51	0.23	109	387	14	34	0.00	30	0.01	753*	54	1.00

LAB ID 82-5082-14
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 709

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.14	1.36	0.47	0.15	222	158	7	45	0.00	8	0.07	231	57	1.00

LAB ID 82-5082-15
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 711

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.13	1.65	0.51	0.11	158	140	5	27	0.00	6	0.02	233	55	1.00

LAB ID 82-5082-16
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 730

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.13	1.85	0.53	0.19	158	222	4*	24	0.00	6	0.02	367	22	1.00

LAB ID 82-5082-18
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 736

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.13	1.87	0.65	0.20	200	250	5	24	0.00	6	0.04	488	32	1.00

LAB ID 82-5082-19
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY ÷ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATOR
TERRE HAUTE, INDIANA 47808

GRAPE SAMPLES
FROM
VILA REAL

Socal-Barr:iro (1 · 103-P)
Cerro-Vermelho (R-99)
Trincheira (R110)
Casarão (1-103-P)
Patamares (1-103-P)
Patamares (R-110)
Casarão sem sintomas (R 99)
Rio (196-17)
Trincheira (1-103-P)
Talhão re ÷ 3 (1-103-P)
140 Ru T4

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER SOCAL-BARREIRO

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.29	0.38	1.63	0.41	122	379	6	23	0.00	1080*	0.11	1070*	6	1.00

LAB ID 82-5080-02
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER CERRO-VERMELHO

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	MN	FE	CU	ZN	%S	B	%NA	AL	BA	SAMPLE WT
						--PARTS PER MILLION--					PPM		PPM	PPM	
	0.00	0.16	0.49	1.52	0.41	88	274	5	13	0.00	17	0.01	652*	5	1.00

LAB ID 82-5080-03
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

INTERNATIONAL MINERALS & CHEMICAL CORPORATION

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER TRINCHEIRA R110

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.20	0.42	1.22	0.41	77	337	6	16	0.00	28	0.01	786*	4*	1.00

LAB ID 82-5080-04
LOG-IN 12/08/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER CASARAO

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.32	0.47	1.16	0.38	61	261	9	25	0.00	30	0.01	477	2*	1.00

LAB ID 82-5080-05
LOG-IN 12/08/81
COMPLETED 12/18/81

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---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER PATAMARES 1-103-P

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.21	0.47	2.41	0.53	224	251	4*	13	0.00	14	0.01	434	7	1.00

LAB ID 82-5086-06
LOG-IN 12/08/81
COMPLETED 12/18/81

82

---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER PATAMARES R-110

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.19	0.54	1.71	0.38	199	198	3*	12	0.00	17	0.08	316	7	1.00

LAB ID 82-5080-07
LOG-IN 12/09/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER CASARA SEMSINTOMAS

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.21	0.61	1.63	0.49	142	185	5	14	0.00	34	0.01	310	4*	1.00

LAB ID 82-5080-08
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE · VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER RIO

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.20	1.51	1.17	0.27	113	197	11	50	0.00	12	0.02	308	19	1.00

LAB ID 82-5080-10
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/8

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER TRINCHETRA 1-103-P

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.22	0.44	1.79	0.55	146	445	7	19	0.00	29	0.02	1220*	4*	1.00

LAB ID 82-5080-11
LOG-IN 12/08/81
COMPLETED 12/18/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	10CPPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER TALHAD

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.29	0.45	1.30	0.40	80	341	8	23	0.00	100	0.03	863*	3*	1.00

LAB ID 82-5080-12
LOG-IN 12/08/81
COMPLETED 12/18/81

87

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
12/18/81

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER 140 RU T4

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.21	0.54	1.25	0.51	128	335	5	20	0.00	22	0.01	756*	2*	1.00

LAB ID 82-5080-13
LOG-IN 12/09/81
COMPLETED 12/18/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

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SAMPLE Nº	DESCRIPTION
1	Vetche and Oat (green)
2	Weeds (E.I.P.O)
3	Oat (aerial pt. green)
4	Grasses (E.I.P.O)
5	Weeds (E.I.P.O)
6	Total sample (grasses, legumes and Weeds) E.I.P.O)
7	" " (E.I.P.O)
8	" " "
9	" " "
10	Vetche (green)
11	Weeds (E.I.P.O)
12	Total sample (E.I.P.O)
13	Grasses (E.I.P.O)
14	Total sample (E.I.P.O)
15	" " "
16	Weeds (E.I.P.O)
17	Grasses (E.I.P.O)
18	" "
19	" "
20	Total sample (E.I.P.O)
21	Grasses (E.I.P.O)
22	Total sample (E.I.P.O)
23	Weeds (E.I.P.O)
24	Grasses (E.I.P.O)
25	Weeds (E.I.P.O)
26	Vetches (Green)
27	Grasses (E.I.P.O)
28	Total sample (E.I.P.O)
29	White clover (green)
30	Vetches and Oats
31	Tall fescue. (green)
32	Grasses (E.I.P.O)
33	Weeds from a consociation Vetche and Oat
34	Total sample (E.I.P.O)

SAMPLE Nº	DESCRIPTION
35	Weeds (E.I.P.O)
36	Grasses (E.I.P.O)
37	Total sample (E.I.P.O)
38	Tall fescue (green)
39	Total sample (E.I.P.O)
40	White clover
41	Lupine. (green)
42	Total sample (E.I.P.O)
43	Oat (aerial pt. green)
44	Total sample (E.I.P.O)
45	Grasses (E.I.P.O)
46	Weeds (E.I.P.O)
47	Total sample (E.I.P.O)
48	Weeds (E.I.P.O)
49	Total sample (E.I.P.O)
50	Weeds (E.I.P.O)
51	Grasses (E.I.P.O)
52	Total sample (E.I.P.O)
53	Weeds (E.I.P.O)
54	" "
55	Total sample (E.I.P.O)
56	Grasses (E.I.P.O)
57	" "
58	Total sample (E.I.P.O)
59	Weeds from a fallow fertilized with 80 Nitrogen unitis
60	Vetches (green)
61	Perennial reygrass. (green)
62	Weeds from a fallow fertilized with 40 Nitrogen unitis
63	" " " " no fertilized
64	" " " " fertilized with 20 Notrogen unitis
65	Oat (aerial pt. green)
66	Birth's foot (green)
67	Vetches (green)

SAMPLE Nº	DESCRIPTION
68	Red clover and subterranean clover. (green)
69	Vetche (green)
70	Grasses (E.I.P.O)
71	Weeds from a consociation Vetche and Oat
72	Total sample from a natural pasture
73	" " (E.I.P.O)
74	Weeds (E.I.P.O)
75	Birth's foot,perennial reygrass,red clover and subterranean clover
76	Weeds (E.I.P.O)
77	Lupine (green)
78	Oat (aerial pt. green)
79	Weeds
80	Oat (aerial pt. green)
81	Total sample
82	Weeds
83	" - (Moldy)
84	Oat (aerial pt. green)
85	" and Vetche
86	Total sample from a fertilized fallow with 20 Nitrogen unitis
87	Grasses from a fertilized fallow with 80 Nitrogen unitis
88	" " " " " " 40 " "
89	" " " " " " 20 " "
90	Grasses from no fertilized fallow
91	Total sample from a natural pasture
92	Weeds
93	Oat. Vetches and Weeds
94	Total sample (E.I.P.O)
95	Weeds
96	"
97	Oat (aerial pt. green)
98	Total sample from a natural pasture
99	Vetche
100	Oat, Vetche and Weeds
101	" , (aerial pt. green)

SAMPLE Nº	DESCRIPTION
102	Total sample (E.I.P.O.)
103	" " "
104	Grasses (E.I.P.O.)
105	" "
106	" "
107	Total sample (E.I.P.O.)
108	Grasses (E.I.P.O.)
109	" "
110	Weeds (E.I.P.O.)
111	Total sample (E.I.P.O.)
112	Grasses (E.I.P.O.)
113	" "
114	Total sample (E.I.P.O.)
115	" " "
116	Weeds (E.I.P.O.)
117	Total sample (E.I.P.O.)
118	Weeds (E.I.P.O.)
119	" "
120	Total sample (E.I.P.O.)

OBSERVATIONS

I - All the samples with (E.I.P.O) are from a seed pasture for sheep seeded 5 years ago with a mixture of: 4 varieties of subterranean clover, red clover, birth's foot, canary grass (Phalaris tuberosa) and perennial rye-grass.

P.O. BOX 207, TERRE HAUTE, INDIANA 47808, (812) 232-0121

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INTERNATIONAL MINERALS & CHEMICAL CORPORATION

January 20, 1982

Dr. C. L. Rhykerd
Agronomy Department
Purdue University
West Lafayette, IN 47907

Dear Dr. Rhykerd:

Here is another group of plant tissue reports from the batch of samples you delivered early in the fall. These samples were analyzed by our new ICP emission spectrograph. Because of this, accuracy limits are different than noted at the bottom of each report. Our tentative accuracy limits for the ICP-ES are shown below.

Element	P	K	Ca	Mg	Mn	Fe	Cu
Minimum	0.03%	.125%	0.02%	0.01%	1 ppm	12 ppm	1 ppm
Maximum	1.00%	5.00%	4.00%	2.00%	1000 ppm	1000 ppm	60 ppm

Element	Zn	B	Al
Minimum	5 ppm	5 ppm	10 ppm
Maximum	500 ppm	200 ppm	600 ppm

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - LVORA 1

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.22	0.91	0.42	0.15	176	38	2*	13	0.00	5	0.24	18*	20	1.00

LAB ID 82-5084-02
LOG-IN 12/09/81
COMPLETED 12/22/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 2

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.32	1.41	1.02	0.23	85	86	4*	259*	0.00	26	0.66*	136	25	1.00

LAB ID 82-5064-03
LOG-IN 12/09/81
COMPLETED 12/22/81

95

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 3

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION-- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.16	0.57	0.15	0.10	136	25	1*	7*	0.00	3*	0.16	6*	10	1.00

LAB ID 82-5084-04
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RUYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 4

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.23	0.40	0.11	434	43	2*	96	0.00	9	0.21	33	23	1.00

LAB ID 82-5084-05
LOG-IN 12/09/81
COMPLETED 12/22/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 5

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	
	0.00	0.26	0.96	0.90	0.26	105	118	5	162*	0.00	24	1.04*	185	24	1.00	

LAB ID 82-5084-06
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ALONSO - EVORA 6

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.09	0.48	0.14	450	74	3*	137*	0.00	13	0.28	97	30	1.00

LAB ID 82-5084-07
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 7

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.33	1.14	0.18	244	83	4*	182*	0.00	30	0.44	137	74	1.00

LAB ID 82-5084-08
LOG-IN 12/09/81
COMPLETED 12/22/81

100

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 PHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 3

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.33	1.98	0.57	0.15	230	68	2*	119*	0.00	9	0.36	61	34	1.00

LAB ID 82-5084-10
LOG-IN 12/09/81
COMPLETED 12/22/81

101

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 9

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.31	0.49	0.14	78	46	2*	141*	0.00	12	0.23	69	19	1.00

LAB ID 82-5084-11
LOG-IN 12/09/81
COMPLETED 12/22/81

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---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 10

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.28	1.31	1.02	0.23	126	82	3*	30	0.00	20	0.23	57	32	1.00

LAB ID 82-5084-12
LOG-IN 12/09/81
COMPLETED 12/22/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 11

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.35	1.75	1.18	0.20	193	143	4*	311*	0.00	20	0.32	284	29	1.00

LAB ID 82-5084-13
LOG-IN 12/09/81
COMPLETED 12/22/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 12

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.23	1.31	0.81	0.17	441	77	3*	203*	0.00	13	0.57*	119	46	1.00

LAB ID 82-5084-14
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L. - PURDUE

CUSTOMER AFONSO - EVORA 13

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.29	1.48	0.50	0.08	78	44	2*	92	0.00	8	0.12	56	14	1.00

LAB ID 82-5084-15
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSU - EVORA 14

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.33	1.78	1.72	0.22	171	142	3*	232*	0.00	32	0.37	210	65	1.00

LAB ID 82-5084-16
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 15

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.28	1.63	0.44	0.14	211	101	3*	156*	0.00	12	0.51*	148	21	1.00

LAB ID A2-5084-18
LOG-IN 12/09/81
COMPLETED 12/22/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ALONSO - EVORA 16

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	
	0.00	0.30	1.14	1.62	0.19	129	59	3*	192*	0.00	30	0.58*	68	38	1.00	

LAB ID 82-5084-19
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 17

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.40	1.65	0.54	0.12	220	118	2*	132*	0.00	5	0.27	139	25	1.00

LAB ID 82-5084-20
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 18

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.25	1.16	0.34	0.12	269	33	1*	117*	0.00	3*	0.20	24*	21	1.00

LAB ID 82-5084-21
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 19

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.[illegible]8	1.54	0.34	0.13	215	70	2*	111*	0.00	6	0.35	56	17	1.00

LAB ID 82-5084-22
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 20

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	
	0.00	0.30	0.96	0.77	0.13	74	86	2*	176*	0.00	11	0.44	138	9	1.00	

LAB ID 82-5084-23
LOG-IN 12/09/81
COMPLETED 12/22/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 21

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.35	1.33	0.46	0.15	99	170	2*	116*	0.00	8	0.39	226	19	1.00

LAB ID 82-5084-24
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ALFONSO - EVORA 22

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.25	1.01	0.60	0.10	103	79	3*	105*	0.00	5	0.30	98	13	1.00

LAB ID 92-5085-02
LOG-IN 12/09/81
COMPLETED 12/22/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 23

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	
	0.00	0.26	0.81	0.92	0.28	126	40	5	177*	0.00	23	1.16*	36	19	1.00	

LAB ID 82-5085-03
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 24

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.40	1.43	0.47	0.16	267	113	3*	80	0.00	5	0.44	179	25	1.00

LAB ID 82-5085-04
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 25

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.38	1.73	1.16	0.21	197	129	5	288*	0.00	29	0.34	244	32	1.00

LAB ID 82-5085-05
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 26

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	
	0.00	0.37	1.53	0.93	0.28	178	84	6	33	0.00	24	0.04	53	43	1.00	

LAB ID 82-5085-06
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 27

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION-- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.39	1.72	0.56	0.16	220	68	4*	89	0.00	10	0.40	59	35	1.00

LAB ID 82-5085-07
LOG-IN 12/09/81
COMPLETED 12/22/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ALONSO - EVORA 28

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.31	1.47	0.45	0.14	154	64	1*	155*	0.00	11	0.18	68	16	1.00

LAB ID 82-5085-08
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 29

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.41	2.73	1.28	0.33	137	156	9	82	0.00	27	0.24	118	55	1.00

LAB ID 82-5085-10
LOG-IN 12/09/81
COMPLETED 12/22/81

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NOTE VALUES NOTED BY ÷ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 30

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	
	0.00	0.25	1.23	0.49	0.15	173	44	3*	16	0.00	11	0.18	22*	22	1.00	

LAB ID 82-5085-11
LOG-IN 12/09/81
COMPLETED 12/22/81

123

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 31

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.48	3.40	0.54	0.29	146	105	3*	53	0.00	8	0.06	106	36	1.00

LAB ID 82-5085-12
LOG-IN 12/09/81
COMPLETED 12/22/81

124

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 32

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.45	0.40	0.11	118	56	1*	95	0.00	3*	0.24	64	27	1.00

LAB ID 82-5085-13
LOG-IN 12/09/81
COMPLETED 12/22/81

125

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ALONSO - EVORA 33

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.31	1.32	0.80	0.22	290	48	4*	20	0.00	18	0.64*	46	46	1.00

LAB ID 82-5085-14
LOG-IN 12/09/81
COMPLETED 12/22/81

126

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - LVORA 34

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.32	1.45	0.55	0.18	253	73	2*	68	0.00	7	0.41	83	21	1.00

LAB ID 82-5085-15
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 06C RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 35

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	2.00	0.24	1.51	0.90	0.21	320	83	4*	172*	0.00	23	0.75*	113	50	1.00

LAB ID 82-5085-16
LOG-IN 12/09/81
COMPLETED 12/22/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 36

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.26	1.01	0.36	0.13	346	51	1*	80	0.00	7	0.28	60	18	1.00

LAB ID 82-5085-18
LOG-IN 12/09/81
COMPLETED 12/22/81

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 37

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	LAB ID / LOG-IN / COMPLETED
	0.00	0.26	1.67	0.38	0.12	139	106	1*	85	0.00	6	0.26	108	25	1.00	82-5085-19 12/09/81 12/22/81

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 38

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.34	2.85	0.43	0.29	129	75	2÷	25	0.00	4÷	0.05	74	27	1.00

LAB ID 82-5085-20
LOG-IN 12/09/81
COMPLETED 12/22/81

131

NOTE VALUES NOTED BY ÷ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 39

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION-- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.28	1.29	0.90	0.22	325	312	4*	156*	0.00	21	0.98*	684*	19	1.00

LAB ID 82-5085-21
LOG-IN 12/09/81
COMPLETED 12/22/81

132

---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 40

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION-- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.26	1.64	1.46	0.37	125	183	7	76	0.00	22	0.47	165	77	1.00

LAB ID 82-5085-22
LOG-IN 12/09/81
COMPLETED 12/22/81

133

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 PHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 41

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.30	1.37	0.72	0.27	622*	279	6	50	0.00	22	0.37	244	26	1.00

LAB ID 82-5085-23
LOG-IN 12/09/81
COMPLETED 12/22/81

134

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 42

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.38	1.10	0.76	0.13	209	313	3*	250*	0.00	10	0.21	474	25	1.00

LAB ID 82-5085-24
LOG-IN 12/09/81
COMPLETED 12/22/81

135

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 43

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.19	1.01	0.17	0.10	139	43	2*	9*	0.00	1*	0.17	8*	10	1.00

LAB ID 82-5086-02
LOG-IN 12/09/81
COMPLETED 01/05/82

136

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PORDOR

CUSTOMER AFONSO - EVORA 44

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	
	0.00	0.11	1.29	0.42	0.11	148	51	4*	125*	0.00	4*	0.28	36	34	1.00	

LAB ID 82-5086-03
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 45

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION-- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	LAB ID 82-5086-04 LOG-IN 12/09/81 COMPLETED 01/05/82
	0.00	0.27	1.82	0.36	0.12	207	50	5	63	0.00	2*	0.58*	34	22	1.00	

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 46

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.22	1.03	0.87	0.22	78	245	9	400*	0.00	14	0.61*	290	29	1.00

LAB ID 82-5086-05
LOG-IN 12/09/81
COMPLETED 01/05/82

139

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 660 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 47

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.29	1.85	0.53	0.09	96	62	4*	96	0.00	4*	0.18	65	18	1.00

LAB ID R2-5046-06
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 49

SAMPLE NUMBER	%N	P	%K	%CA	%MG	MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	
						--PARTS PER MILLION---										
	0.00	0.43	1.61	1.29	0.24	193	475	8	84	0.00	23	0.73*	1130*	28	1.00	

LAB ID 82-5096-07
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 49

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.33	1.40	0.63	0.22	243	199	6	142*	0.00	13	0.90*	347	28	1.00

LAB ID 82-5086-08
LOG-IN 12/02/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 50

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.38	1.57	1.39	0.22	90	173	6	295÷	0.00	18	0.84÷	263	17	1.00

LAB ID 82-5086-10
LOG-IN 12/03/81
COMPLETED 01/05/82

143

NOTE VALUES NOTED BY ÷ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 51

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.26	1.39	0.37	0.09	254	122	4*	152*	0.00	3*	0.18	180	19	1.00

LAB ID 82-5086-11
LOG-IN 12/09/81
COMPLETED 01/05/82

144

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 52

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.24	1.77	0.68	0.16	97	60	5	108*	0.00	14	0.92*	55	34	1.00

LAB ID 82-5086-12
LOG-IN 12/02/81
COMPLETED 01/05/82

145

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 PHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVURA 53

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.21	1.24	1.12	0.20	179	92	5	337*	0.00	30	1.15*	96	55	1.00

LAB ID 82-5086-13
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 PHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 54

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	LAB ID 82-5086-14 LOG-IN 12/09/81 COMPLETED 01/05/82
	0.00	0.21	1.08	0.99	0.19	209	131	7	209*	0.00	19	0.82*	85	59	1.00	

147

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 050 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 55

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.92	0.97	0.19	202	148	7	118*	0.00	16	0.90*	199	38	1.00

LAB ID 82-5086-15
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RUYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 56

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.86	0.33	0.12	84	89	8	61	0.00	3*	0.42	91	21	1.00

LAB ID 82-5086-16
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 HAYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 57

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	1.00	0.27	1.57	0.38	0.13	666*	152	4*	140*	0.00	4*	0.27	245	34	1.00

LAB ID 82-5086-18
LOG-IN 12/09/81
COMPLETED 01/05/82

150

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 58

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.45	1.79	1.30	0.24	159	365	7	83	0.00	21	0.67*	697*	21	1.00

LAB ID 82-5046-19
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 59

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.38	3.70	1.94	0.25	95	131	9	91	0.00	32	0.25	154	79	1.00

LAB ID 82-5086-20
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ALONSO - EVORA 60

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.43	2.77	0.97	0.26	218	148	8	59	0.00	24	0.04	124	39	1.00

LAB ID 82-5086-21
LOG-IN 12/09/81
COMPLETED 01/05/82

153

NOTE VALUES NOTED BY ÷ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ALONSO - EVORA 61

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.35	2.00	0.32	0.13	129	40	4*	17	0.00	3*	0.14	18*	19	1.00

LAB ID 82-5036-22
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ALONSO - LVDRA 62

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.36	3.69	1.84	0.25	93	79	8	93	0.00	33	0.26	75	83	1.00

LAB ID 82-5086-23
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ALONSO - EVORA 63

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.44	3.53	2.14	0.26	56	179	8	94	0.00	34	0.31	273	94	1.00

LAB ID 82-5086-24
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 64

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.40	3.75	1.84	0.24	62	1:1	8	99	0.00	30	0.28	124	113*	1.00

LAB ID 82-5087-02
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.0[illegible]	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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ACCOUNT 060 RHYKERD OR C L - PURDUE

CUSTOMER ALONSO - EVORA 65

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.19	1.09	0.15	0.10	143	38	3*	14	0.00	1*	0.14	11*	11	1.00

LAB ID 82-5087-03
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 66

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	LAB ID 82-5087-04 LOG-IN 12/09/81 COMPLETED 01/05/82
	0.00	0.37	1.99	1.27	0.25	198	140	6	38	0.00	24	0.51*	76	36	1.00	

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ALFONSO - EVORA 67

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
						--PARTS PER MILLION---									
	0.00	0.48	2.85	1.14	0.30	177	195	6	47	0.00	24	0.32	174	32	1.00

LAB ID 82-5087-05
LOG-IN 12/09/81
COMPLETED 01/05/82

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---------- NOTE VALUES NOTED BY ◊ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD PR C L - PURDUE

CUSTOMER AFONSO - EVORA 68

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.36	2.23	1.38	0.24	74	152	8	29	0.00	24	0.19	61	22	1.00

LAB ID 82-5087-06
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	U	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 360 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 69

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.43	2.44	1.04	0.29	211	115	11	78	0.00	20	0.05	77	60	1.00

LAB ID 82-5087-07
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 70

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.02	0.38	0.09	193	94	2*	163*	0.00	3*	0.18	131	15	1.00

LAB ID 82-5087-08
LOG-IN 12/09/81
COMPLETED 01/05/82

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---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 71

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.36	2.34	0.78	0.18	273	69	7	38	0.00	17	0.70*	52	27	1.00

LAB ID A2-5037-10
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 72

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	LAB ID 82-5087-11 LOG-IN 12/09/81 COMPLETED 01/05/82
	0.00	0.20	2.25	0.24	0.19	155	56	7	49	0.00	1*	1.16*	42	21	1.00	

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD OR C L - PURDUE

CUSTOMER AFONSU - EVORA 74

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	
	0.00	0.22	0.97	0.33	0.13	236	61	2*	118*	0.00	3*	0.50	72	24	1.00	

LAB ID B2-5087-12
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 74

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.24	1.33	0.92	0.25	346	110	7	358*	0.00	20	0.61*	150	16	1.00

LAB ID 82-5087-13
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER ALONSO - EVORA 75

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	
	0.00	0.34	2.05	0.78	0.18	112	55	5	19	0.00	13	0.31	39	23	1.00	

LAB ID 82-5087-14
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 76

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.36	2.23	0.83	0.21	275	69	7	28	0.00	19	0.66*	67	24	1.00

LAB ID 82-5097-15
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L PURDUE

CUSTOMER AFONSO - EVORA 77

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.22	0.98	0.74	0.30	673*	126	6	30	0.00	8	0.38	67	32	1.00

LAB ID 82-5087-16
LOG-IN 12/02/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 78

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.25	1.35	0.27	0.14	169	54	3*	15	0.00	2*	0.24	28*	13	1.00

LAB ID 82-5087-18
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 79

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.31	1.67	0.49	0.18	230	44	7	21	0.00	11	0.65*	46	24	1.00

LAB ID 82-5087-19
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 80

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.69	0.26	0.16	153	64	5	52	0.00	2*	0.29	48	16	1.00

LAB ID 82-5087-20
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	10CPPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 81

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.31	1.11	0.72	0.19	316	163	6	316*	0.00	13	0.64*	238	18	1.00

LAB ID 82-5087-21
LOG-IN 12/09/81
COMPLETED 01/05/82

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---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 82

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.40	2.29	0.52	0.18	169	136	9	38	0.00	9	0.31	149	21	1.00

LAB ID 82-5087-22
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY ÷ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 83

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION-- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.37	2.46	0.81	0.17	159	65	8	31	0.00	15	0.50	56	49	1.00

LAB ID 82-5087-23
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 85

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.90	0.29	1.63	0.41	0.12	137	39	4*	29	0.00	6	0.12	19*	21	1.00

LAB ID 82-5087-24
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 86

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.20	1.54	0.15	0.13	192	49	3*	36	0.00	2*	0.36	20*	19	1.00

LAB ID 82-5088-02
LOG-IN 12/09/81
COMPLETED 01/12/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 87

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.36	2.51	0.42	0.14	118	80	6	73	0.00	5	0.05	103	30	1.00

LAB ID 82-5088-03
LOG-IN 12/09/81
COMPLETED 01/12/82

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NOTE VALUES NOTED BY ÷ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 86

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.37	2.48	0.40	0.13	92	93	6	75	0.00	6	0.05	57	32	1.00

LAB ID 82-5088-04
LOG-IN 12/09/81
COMPLETED 01/12/82

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NOTE VALUES NOTED BY ÷ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 89

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.37	2.19	0.45	0.13	74	61	4÷	82	0.00	6	0.06	50	34	1.00

LAB ID 82-5088-05
LOG-IN 12/09/81
COMPLETED 01/12/82

NOTE VALUES NOTED BY ÷ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47803

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 90

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.39	2.14	0.40	0.12	52	89	3*	83	0.00	5	0.05	145	30	1.00

LAB ID 82-5088-06
LOG-IN 12/09/81
COMPLETED 01/12/82

182

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 91

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	LAB ID / LOG-IN / COMPLETED
	0.00	0.20	1.65	0.18	0.14	212	38	2*	36	0.00	3*	0.24	19*	22	1.00	LAB ID 82-5088-07 LOG-IN 12/09/81 COMPLETED 01/12/82

183

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 92

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.30	1.67	0.80	0.23	320	76	5	26	0.00	15	0.55*	76	42	1.00

LAB ID 82-5088-08
LOG-IN 12/09/81
COMPLETED 01/12/82

184

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 93

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.25	1.30	0.41	0.15	215	58	4*	23	0.00	7	0.24	35	19	1.00

LAB ID 82-5088-10
LOG-IN 12/09/81
COMPLETED 01/12/82

185

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 94

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.24	1.55	0.41	0.13	213	52	2*	116*	0.00	7	0.29	52	22	1.00

LAB ID 82-5088-11
LOG-IN 12/09/81
COMPLETED 01/12/82

186

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 95

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT	LAB ID 82-5088-12 LOG-IN 12/09/81 COMPLETED 01/12/82
	0.00	0.37	2.10	0.68	0.21	214	108	5	29	0.00	12	0.48	103	23	1.00	

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NOTE VALUES NOTED BY ÷ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 96

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.24	1.52	0.35	0.12	222	53	3*	17	0.00	5	0.26	27*	23	1.00

LAB ID 82-5088-13
LOG-IN 12/09/81
COMPLETED 01/12/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 97

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.17	0.73	0.14	0.10	149	44	1*	10	0.00	1*	0.30	82	10	1.00

LAB ID 82-5088-14
LOG-IN 12/09/81
COMPLETED 01/12/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 98

LAB ID 82-5088-15
LOG-IN 12/09/81
COMPLETED 01/12/82

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.20	1.82	0.20	0.16	179	91	5	48	0.00	3*	0.55*	61	19	1.00

190

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 99

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.37	1.75	0.90	0.29	211	119	7	46	0.00	18	0.06	86	48	1.00

LAB ID 82-5088-16
LOG-IN 12/09/81
COMPLETED 01/12/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 100

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.24	1.31	0.44	0.18	246	62	4*	20	0.00	9	0.34	46	30	1.00

LAB ID 82-5088-18
LOG-IN 12/09/81
COMPLETED 01/12/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 101

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.23	1.16	0.15	0.10	162	40	2*	14	0.00	1*	0.10	40	15	1.00

LAB ID 82-5088-19
LOG-IN 12/09/81
COMPLETED 01/12/82

193

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47809

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 102

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.17	1.21	0.31	0.10	208	55	2*	116*	0.00	4*	0.27	47	20	1.00

LAB ID 82-5088-20
LOG-IN 12/09/81
COMPLETED 01/12/82

194

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 103

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.28	1.27	0.62	0.18	221	74	4*	207*	0.00	11	0.31	98	27	1.00

LAB ID 82-5088-21
LOG-IN 12/09/81
COMPLETED 01/12/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 104

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.20	1.16	0.29	0.10	209	46	1*	121*	0.00	3*	0.15	44	17	1.00

LAB ID 82-5088-22
LOG-IN 12/09/81
COMPLETED 01/12/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - P'RDUE

CUSTOMER AFONSO - EVORA 105

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION-- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.28	1.57	0.36	0.12	148	70	1*	129*	0.00	4*	0.18	90	20	1.00

LAB ID 82-5088-23
LOG-IN 12/09/81
COMPLETED 01/12/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 106

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.29	1.39	0.34	0.12	410	56	2*	97	0.00	4*	0.29	58	31	1.00

LAB ID 82-5088-24
LOG-IN 12/09/81
COMPLETED 01/12/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 107

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.32	1.70	0.85	0.16	188	153	5	264≠	0.00	14	0.29	258	24	1.00

LAB ID 82-5089-02
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY ≠ ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 108

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.31	2.05	0.45	0.11	91	67	5	68	0.00	3*	0.26	46	23	1.00

LAB ID 82-5089-03
LOG-IN 12/09/81
COMPLETED 01/05/82

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---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
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ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 109

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.34	1.45	0.35	0.19	107	709*	4*	53	0.00	4*	0.63*	1310*	20	1.00

LAB ID 82-5089-04
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 110

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.30	1.83	1.11	0.21	211	137	6	163*	0.00	22	0.67*	170	46	1.00

LAB ID B2-5089-05
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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TERRE HAUTE, INDIANA 47808

IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA III

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.24	1.37	0.34	0.14	360	87	2*	133*	0.00	4*	0.38	116	26	1.00

LAB ID 82-5089-06
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

IMC AGRONOMIC SERVICES LABORATORY
TERRE HAUTE, INDIANA 47808

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C I - PURDUE

CUSTOMER AFONSO - EVORA 112

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION-- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.21	0.97	0.24	0.11	259	49	2*	95	0.00	1*	0.51*	62	18	1.00

LAB ID 82-5089-07
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 113

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.28	1.34	0.38	0.10	118	53	3*	102*	0.00	2*	0.24	54	22	1.00

LAB ID 82-5089-08
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 114

LAB ID 82-5089-10
LOG-IN 12/09/81
COMPLETED 01/05/82

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.30	1.67	0.50	0.12	83	54	3*	63	0.00	3*	0.33	61	27	1.00

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - LVORA 115

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.34	1.52	0.38	0.20	99	413	3*	49	0.00	3*	0.79*	634*	18	1.00

LAB ID 82-5089-11
LOG-IN 12/09/81
COMPLETED 01/05/82

307

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RAYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 116

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.33	1.68	0.95	0.31	335	144	7	182*	0.00	19	0.63*	237	16	1.00

LAB ID 82-5089-12
LOG-IN 12/09/81
COMPLETED 01/05/82

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---------- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----------

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 117

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.34	0.50	0.16	98	229	4*	162*	0.00	5	0.49	322	20	1.00

LAB ID 82-5089-13
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 118

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.36	2.06	1.71	0.23	153	155	7	207*	0.00	27	0.48	201	50	1.00

LAB ID 82-5089-14
LOG-IN 12/09/81
COMPLETED 01/05/82

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---- NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED. ----

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 119

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.34	1.43	0.95	0.28	175	58	6	277*	0.00	18	0.57*	63	31	1.00

LAB ID 82-5089-15
LOG-IN 12/09/81
COMPLETED 01/05/82

NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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IMC PLANT TISSUE ANALYSIS REPORT
01/19/82

ACCOUNT 060 RHYKERD DR C L - PURDUE

CUSTOMER AFONSO - EVORA 120

SAMPLE NUMBER	%N	%P	%K	%CA	%MG	--PARTS PER MILLION--- MN	FE	CU	ZN	%S	PPM B	%NA	PPM AL	PPM BA	SAMPLE WT
	0.00	0.27	1.21	0.66	0.15	420	106	5	165*	0.00	9	0.50	133	26	1.00

LAB ID 82-5089-16
LOG-IN 12/09/81
COMPLETED 01/05/82

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NOTE VALUES NOTED BY * ARE OUTSIDE THE ACCURACY LIMITS FOR THE SAMPLE WEIGHT INDICATED.

ACCURACY LIMITS FOR THE STANDARD ONE GRAM SAMPLE ARE AS FOLLOWS

ELEMENT	P	CA	MG	MN	FE	CU	ZN	B	NA	AL	BA
MINIMUM	0.05%	0.08%	0.04%	10PPM	25PP	5 PPM	10PPM	5PPM	0.01%	30PPM	5PPM
MAXIMUM	1.00%	4.00%	2.00%	500PPM	500PP	100 PPM	100PPM	100PPM	0.50%	500PPM	100PPM

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