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FOOD

Successful seminar on “Analytical systems of chemical residues for agricultural and food products” in Costa Rica

During the 14 and 15th March AGQ gave a seminar on “Chemical analytical systems for agricultural and food products” in San José (Costa Rica), organized by Procomer (Promotora de Comercio Exterior de Costa Rica). We found representation from agrochemical, processed foods, banana and pineapple amongst other sectors. A great dynamism was achieved between the speakers and audience. José Luis Gómez, current Sales Manager in AGQ USA, Javier Marrufo current Country Manager for AGQ Costa Rica and Jesse Calvillo, current Laboratory Manager in AGQ USA.

Dealt with a wide range of topics such as “Technical proceedings in sampling and sample pre-

paration”, “control and prevention in origin success at destination”, “legislation, registration and situation of pesticides products”, “Distribution network tendencies and requirements” amongst other topics.



MINING

AGQ laboratories in Peru and Spain achieve the accreditation ISO 17025 for mineral analysis

The North American entity International Accreditation Services (IAS) has recently given AGQ laboratories in Peru the accreditation for metal analysis – gold and silver included, on rocks and minerals. This appreciation puts our installations among the most important group of laboratories which provide for services the mining industry in this country. Peru is one of the main metal-producing countries worldwide. Specifically, according to the Energy and Mining Minister of the country

data, it is the first silver-producing country worldwide and the second one copper-producing. Also, it is the first gold, zinc, tin, lead and molybdenum producing in Latin America. AGQ launched its laboratories of La Perla – Callao, Lima, at the end of last year with a clear spirit for service to the mining industry. The IAS accreditation along with a great commitment of technical and human resources is one more necessary step to reach a high level of quality and competitiveness in such as specialized market. Among the mining services that our laboratories offer, we find metal analysis in low, medium and high metallic elements concentration (ICP-OES – Volumetric), gold, silver and precious metal (fire test – AAS – gravimetry), sulfur and its methods of analysis; besides organic components analysis or environmental tests in different moulds: water, floor, mud, particles, vegetable and animal samples. Apart from mining, AGQ Peru laboratories offer a wide range of additional services for environmental and other producing sectors.



AGQ Mining, important part of a European I+D project for quality improvement of acid waters from mining activity

AGQ Mining & Bioenergy, as a member of the consortium/AIE, lead by the company SACYR, to whom SADYT and Cabal Geólogos Consultores also belong, will be part of the I+D Research and development of new treatments for quality improvement of acid mining industry waters) project. The AGQ subsidiary company will guide the research line based on the development of an active treatment of water system and the research about the use of the resulting mud on dump sealing, which generates acid leachates. It

will count on a 739.653 € subsidy for that purpose. The Project is included in the INTERCONECTA programme, which is financed by the EU and given by the Centre for the Industrial Technological Development (CDTI), part of the Ministry of Economy and Competitiveness of Spain. The subject of the project is to develop new techniques for the treatment of mining acid waters and hydrological modeling of contaminated watersheds, applied to the basins of the rivers affected by the Faja Pirítica Ibérica, with a total amount of 2.361.224,20 €.

ENVIRONMENT

Positive outcome for AGQ in the 2012 SMAGUA international exhibition

As in past years, AGQ had its own stand in the International Exhibition of water and irrigation (SMAGUA) which took place from March 6th to 9th in Zaragoza (Spain). While the number of visitors has been reduced compared to previous years, according to organizational assessments,



the event has been a success in terms of "satisfaction among visitors and support of participa-

ting companies".

The most revealing figures are the number of exhibiting firms, 1027, and the number of visitors, which exceeded 35,000. Concretely the presence of AGQ was very positive. More than one hundred companies in the water sector (consultants, water and mining consortiums) were able to visit the AGQ stand, which represents a number greater than that of previous years.

The most requested services have been environmental analyses in different matrices such as water, soil, and sludge.

Sampling and Environmental quality studies were also popular topic of interest. Also, visitors have shown interest in other areas of services including agronomy (nutritional monitoring of crops, water audits, etc...), food testing, industry (BPL-REACH), and mining. Along with South American businesses, companies from North African countries such as Morocco, Tunisia, Mauritania and Ivory Coast have paid attention to analytical services related to mining. In fact, AGQ currently already has a Mining Laboratory in Peru.

SAG allocates AGQ the superficial water analysis in Copiapó (Chile)

Farming and Ranching Service of Chile (SAG) has recently allocated AGQ Chile the tender for the superficial water analysis in Copiapó. This agreement is aimed to 'create basis lines about water quality in general and verify the compliance with current legislation' according to the bidding terms.

To allocate the work, the relevant agency has taken into account, amongst others, delivery time of results and the quality of the competitor services. In this sense, AGQ laboratories in Chile boast at present the 17025 accreditation in Microbiology and Physicochemical areas for water.

Also they have at their disposal the latest te-

chnology and qualified staff for an effective and fast result of their analytic services. Among our equipment, stand out Optical ICP, Segmented Flow analyzers or GS-MS, amongst others. The samples to study, minimum of 28, will be carried out between March and December 2012, at seven different control units.

This part of the process will be studied by SAG employees of Atacama region, and analyzed later by AGQ laboratories in Chile. Within the parameters that will be analyzed for water samples are coliforms fecals, aluminum, arsenic, barium, copper, iron, vanadium, zinc or pH. All of them are accredited under the standar NCh-ISO 17025.

AGRONOMY

Kiwi in Italy: Collaboration with some of the most important companies

Not many people know that Italy is the world's largest kiwi producer. This product, originated in China, which had its first business boom in New Zealand, is a highly valued fruit because of its nutritional properties, with high E vitamin, Omega-3 and Omega-6 fatty acids content.

The transalpine country has an extension of 25,000 hectares of kiwi, basically spread over the most typical areas: The Veneto (around Verona), Emilia-Romagna (around Cesena) and Latina (Southern Rome). In this last area, production has decreased this year as a consequence of a virulent



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bacterial disease - *Pseudomonas Syringae* Patovar Actinidia, which has decreased the producing surface about four or five thousand hectares. In this sense, the Agricultural and Livestock Service of Chile has recently recognized that first signs have been detected in O'Higgins and Maule country estate. Chile is the third producing country, with over 15,000 hectares, following New Zealand, which has an extension of 21,000 ha nowadays. Other important producing countries are China, France, Spain and Greece.

From the beginning of this agricultural season, AGQ Labs is collaborating with some of the most important Italian companies in this sector, such as Aprofuit Italia and Kiwigold Consortium. According to Andrea Bresolin, AGQ Labs delegated in Italy, what these companies are looking for is a help tool to guide their growing. Kiwi doesn't have particular needs, but it is strongly salinity sensitive. On the

other hand, in crisis situations as at the present (because of bacteriosis), a balanced nutrition will make more resistant plantations. Many technicians link the PSA bacteriosis problem to a nutritional problem of the plant.

The most cultivated variety in Italy is Hayward, obtained in 1926 by the New Zealander farmer Hayward Wright. This variety spreads all over the world because it is not legally protected and it is all climates-resistant. Secondly, we find the protected Summer3373® variety, owned by the brand SummerKiwi®. As well as producing green kiwi, Italy keeps its top position on yellow variety-producing. Jintao® is the most important brand among this variety, owned by KiwiGold consortium, which also has companies in Chile and China. Zespri Gold® is the other yellow kiwi-producing brand and the most famous worldwide because of its production and presence all over the most productive areas.

BIOPHARMACEUTICS

Alliance with CIAB for bioequivalence studies in Chile



AGQ Labs and CIAB (Centro de Investigaciones Avanzadas en Biomedicina of Universidad de Concepción) have consolidated an alliance for collaboration in clinical trials of bioequivalence. In this regard CIAB is to be responsible of the development of Clinical Trial Research, Pharmacokinetics and Statistical Analysis. On the other hand, in AGQ we have a modern facility for participating as a bioanalytical laboratory, specialized in sample analysis of Bioequivalence trials.

The study director and principal investigators are a technical staff comprised of clinical pharmacists, pharmacologists and PhDs.

Phases of bioequivalence study:

Clinical Phase

The bioequivalence trials are considered as clinical trials, specifically as phase I study, the general requirements and recommendations of GCP apply to all bioequivalence trials. Clinical trials

must be carried out under conditions which ensure adequate safety of the subjects.

The organization or institution performing bioequivalence studies is responsible for determining the specifications of the sampling method, volume and number of healthy Volunteers.

CIAB and Hospital Guillermo Grant Benavente from VIII Región in Chile, is the first regional center for bioequivalence trials. This center has the accreditation of ISP since September, 2011.

Bioanalytical data (laboratory phase)

Two processes are important before the sample analysis: validation of the analytical method and the study to support the stability of the samples. And then analysis of biological samples from clinical trials.

The analysis is performed in AGQ with established quality assurance systems. In this sense we used the general principles of GLP. We, also, have the ISO accreditation to participate like a bioanalytical laboratory in bioequivalence trials.

AGQ Labs is a Technological Center with advanced technologies in analytical chromatographic equipment (LC-MS. High resolution, highly sensitive, connected to mass-mass spectrophotometry). Moreover our technical staff of researchers, chemists and pharmacologists, allows our company to be leaders in bioanalytical studies.

Pharmacokinetic and statistical calculations

In this phase, the principal investigator is a full professor in the University, pharmacist and pharmacologist. The data generated in the bioanalytical phase, is evaluated to demonstrate bioequivalence between innovator and generic drugs.

AGQ participated in V meeting of biomedicine

In November, 2011. Dr. Miguel Copaja, Technical Director of Biopharmacy in AGQ Chile was a speaker in the meeting of biomedicine. His presentation was "Analytical techniques for bioequivalence study." This meeting of biomedicine was organized by CIAB - University of Concepción and had like principal title "Advances in biomedical research. Use of bioequivalent drugs for a quality therapy."

The meeting was attended by over 200 people, including representatives of the pharmaceutical

industry, clinical investigators, physicians, pharmacists and PhD students.



AGQ promotes its channels of client communication

AGQ, en línea a su política de prestar, cada vez más, servicios de calidad a sus clientes, ha dado un nuevo impulso a esta área de la empresa. Para ello, ha dotado de nuevos recursos a su departamento de atención al cliente y ha abierto dos nuevos canales de comunicación directa como son Facebook y Twitter. La empresa tiene previsto, además, el lanzamiento de una nueva plataforma de servicios en internet para sus clientes en el segundo trimestre de este año.

Recientemente, AGQ ha renovado sus esfuerzos para mejorar sus servicios de atención al cliente. Así, ha ampliado el personal que atiende las necesidades de este departamento, facilitando nuevos recursos y una formación más especializada. Queremos lograr así, una mayor agilidad en las consultas de nuestros clientes y atender de un modo más eficaz a las necesidades que nos plantean.

Además, estamos en continua renovación de

nuestras herramientas en internet para abrir nuevos canales de comunicación. De este modo, facilitamos un diálogo directo con nuestros clientes en las redes sociales de mayor popularidad. Los usuarios que lo deseen pueden seguir nuestras novedades en Facebook (www.facebook.com/agqlabs) y Twitter (twitter.com/agqlabs) además de poder expresar sus comentarios y sugerencias.

Estamos trabajando, además, para generar nuevos contenidos de calidad con el objetivo de compartirlos en nuestra página web y en las redes sociales. Podrán disfrutar, compartir y comentar artículos técnicos relacionados con las áreas de trabajo de la empresa (alimentaria, agronomía, medio ambiente, industria, minería y biofarmacia) así como, acceder a valoraciones exclusivas de temas de actualidad referentes, también, a estas áreas. Cada información que se publica está dotada de las herramientas necesarias para que los usuarios de la web puedan hacer sus comentarios y sugerir nuevos temas.

Queremos compartir, también, nuevos contenidos multimedia en otros canales de comunicación específicos como Youtube (www.youtube.com/AGQLabs) y Flickr. En este sentido, estamos trabajando para ofrecer material didáctico de calidad en formato imágenes y vídeos.

Besafer. Nueva herramienta para nuestros clientes en internet.

AGQ trabaja en herramientas que ofrezcan a sus clientes una mayor accesibilidad de los resultados analíticos. BeSafer, una avanzada plataforma de servicios en internet, permitirá el acceso a una completa graficación de los resultados y el tratamiento estadístico de los mismos. Este servicio está previsto que entre en funcionamiento a lo largo del segundo trimestre de 2012.



Técnicos de Disagro (multinacional líder en el suministro de insumos agrícolas y socio de AGQ Labs) de Guatemala, Nicaragua, el Salvador, Honduras y México visitaron nuestras instalaciones en Santiago de Chile.