



Top stories in this newsletter



Introduction



EMA Reference Standards & Custom Solutions



Product Improvement & Maintenance

INTRODUCTION - MESSAGE FROM PETER STOW ASITA 2015/EMA/EML

Welcome to the July 2015 edition of the Isomass newsletter. The past year has been a very busy one for us with many conferences, workshops and product introductions. One workshop I would like to tell you about is the ASITA workshop which took place recently at the University of Ottawa. ASITA is the Advances in Stable Isotope Techniques and Applications and was formerly the Canadian CF-IRMS workshop. This is a small workshop which focuses on the "how-to" of stable isotope analysis rather than completed studies and is a must attend for anyone starting a lab or expanding their research. The staff at the G.G. Hatch lab put on an exceptional workshop that was appreciated by all attendees with a diverse range of talks from $\delta^{15}\text{N}$ analysis in tree rings to mass spectrometry on Mars. For details of next year's workshop please see the Isogeochem Internet listserver.



At ASITA we highlighted the Delta Ray Infra-Red Isotope Spectrometer and our recent cross Canada road trip in which we drove a Delta Ray from coast to coast. For this trip we mounted a Delta Ray inside an RV and continuously monitored the atmosphere through Canada's diverse environments. The Delta Ray provided a snapshot of the ^{13}C , ^{18}O and concentration of atmospheric CO_2 as we drove along. The differences between rural and urban are clearly visible in the data, including when we were stationary at traffic lights. Changes in CO_2 between day time and night time show up like night and day! For more information please go to the web site www.thermoscientific.com/DeltaRayRoadTrip. All the data from the trip is freely available, please send an email request if you have any product questions or would like more information on the Delta Ray.

The rest of this edition of the newsletter focuses on recent product introductions from our supplier, Elemental Microanalysis. This company is known for the quality of its elemental analyzer consumables and its recently introduced CRM's for AA, IC, ICP and ICP-MS. However, I'm sure that their new Long Stem Filling Funnel and Sicapent Scoop - Stainless Steel Ladle with 300mm Handle will be of interest to anyone dealing with chemicals.

EMA STANDARDS

HIGH PERFORMANCE STANDARDS AND REFERENCES FOR INORGANIC AND PETROCHEMICAL ANALYSIS

About EMA Standards

The EMA Standards brand is offered by Elemental Microanalysis (EML) a UK specialist in analytical consumables and reference materials for 40 years and winner of the Queen's Award for International Trade in 2014.

Accreditation

All EMA Standards products are manufactured from the highest purity materials and strictly controlled procedures under ISO 9001, ISO 17025 and ISO Guide 34 accreditation.

Suitability

These materials are suitable for analysis by ICP, ICP-MS, AA, IC AND XRF.

Certification

Each product is supplied with a comprehensive certificate of analysis and traceability. Contact us for a sample certification.

Value

All EMA Standards products follow the EML tradition offering a value price without any compromise on quality or performance.

Applications

EML Standards are used in laboratories across a wide variety of industries.

Custom products and mixtures

EML offers a full range of custom made products to suit your application at very cost effective prices.



LEAD CHROMATE ALTERNATIVE



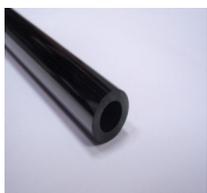
Lead chromate $PbCrO_4$ CAS no. 7758-97-6 has been used for many years as a reagent for the absorption of sulphur dioxide, particularly in analyzers manufactured by Elementar. It is now known that lead chromate presents some serious health issues. Under the European REACH regulations lead chromate is classified as a "SVHC" (Substance of Very High Concern) meaning that its general use is due to be banned (no specific date has been set so far). Disposal of "spent" reagent needs great care and is very costly. In view of the safety considerations for customers and employees Elemental Microanalysis no longer offers this substance.

Alternative

The most suitable replacement for sulphur dioxide removal is silver wool. This option is also recommended by Elementar. Elemental Microanalysis offers a prepacked combustion tube suitable for the Vario EL III, Vario EL Cube and Vario Micro.

X2506 - PREPACKED N/NC/CHN REACTION TUBE VARIO EL3/CUBE/MICRO CUBE (NO LEAD CHROMATE)

GLASSY CARBON & CERAMIC OUTER TUBES TECHNICAL INFO



It has been reported that the highly expensive glassy carbon tubes used in these systems can be subjected to oxygen attack if installed in combination with a used ceramic outer. This may also be observed if the ceramic has been temperature cycled frequently. The effect has been attributed to micro fractures forming in the ceramic caused by aluminum and oxygen atoms of the structure becoming mobile at the elevated temperatures. Visually, the tube appears unaffected. To avoid this, it is recommended to change the (relatively inexpensive) outer ceramic whenever the glassy carbon tube is replaced.

OEM	Analyzer	Ceramic P/N	Ceramic Dimensions (mm)	Glassy Carbon P/N	Glassy Carbon Dimensions (mm)
Thermo	TC/EA	C1101	17 x 13 x 470	C7001	12 x 7 x 356
Thermo	Flash HT	C1105	17 x 13 x 450	C7001	12 x 7 x 356
Hekatech	HT—O	C1103	19 x 15 x 470	C7004	12 x 9 x 400
Eurovector	HT—pyrOH	C1102	17 x 13 x 450	C7004	12 x 9 x 400
Elementar	Pyrocube	C1106	30 x 23 x 387	C7017	18 x 14 x 432

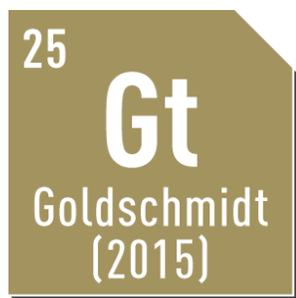
IMPROVED SILVER TUNGSTATE/MAGNESIUM OXIDE PRODUCT IMPROVEMENT



As part of on-going product improvement users will notice a change in the appearance of the silver tungstate/magnesium oxide reagent. The active ingredients and function remain the same but the new product has been shown to improve baseline stability in hydrogen analysis and reduce H_2O peak tailing as observed in certain applications. In practice the new product is used as a direct substitute for the old.

Part numbers affected: B1038, B1036, B1145 and X2000

CONFERENCES - Come visit us at this year's Goldschmidt!



PRAGUE, CZ

AUGUST 16 - 21
2015

Analab — Booth 34

Selfrag — Booth 04

Thermo Scientific — Booths 01 & 02