This report discusses some aspects of methodology and standardization of direct ET AAS determination \( n \cdot 10^{-5} - n \cdot 10^{-4} \) mass.% Ge, Sn, Pb, As, Bi, Sb, Zn and Cd in representative mass (0,050-0,100 g) high-purity refractory metal oxides and its based materials.

It was investigated the atomization profile of high listed elements at its evaporation from increasing weight (0,010-0,100 g) of C, SiO\(_2\), ZrO\(_2\), HfO\(_2\), TiO\(_2\) and some of appropriate materials. To prevent a losses of materials to be analyzed at the high temperature of furnace ("furnace-flame" atomizer) they were previously briquetted on cylindrical tablets. This technique allows easily, quickly, loss less and reproducibility operated with replacement of analytes on graphite furnace of "furnace-flame" atomizer that was used in this work.

There was established that nature of material are renders significant effect on evaporation and atomization profile of Ge, Sn, Pb, As, Bi, Sb, Zn and Cd. Thus at the direct ET AAS analysis of representative mass of solid, powdered materials it is necessary to take into consideration probability of their sintering as well as formed of new chemical compounds including corresponding solid solutions. In the issue this processes are significant interfered on integrated absorbance values of atoms to be determined and according its on accuracy of analysis. To take its into consideration at the direct ET AAS analysis of solids and powdered materials it is propose to used as standards samples an appropriate certificated reference materials and to obtain accuracy and reproducible results are expedient to work with representative analytes not less than 0,020-0,050 g.

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**INSPECTION, TESTING AND VERIFICATION OF INDUSTRIAL PRODUCTS ON ALPHA INSPECT ACTIVITIES**

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**Type of Business Activity**

The primarily activities of ALPHA INSPECT Warenprufung GmbH Vienna (from hereafter ALPHA INSPECT) are inspection, testing and verification of goods and transport means in the process of international trade within Western and Eastern European Countries (mainly NIS, Baltic States and Romania). That explains why the city of Vienna has been chosen for the starting operations office, as well as for headquarters of the Company afterwards.

Its business includes the monitoring services and logistics within a transporting process as welt, which helps to ensure contract compliance and improve speed and efficiency of transactions and the respect of delivery and production schedules.
ALPHA INSPECT will also provide services to the insurance sector, services to banks and certification.

Types of Survey Reports;
- Loss and Damage Survey Report (of a vessel or some other means of transport)
- Condition Survey Report (of a vessel and/or some other means of transport)
- Holds/Tank Cleanliness Survey Report
- Survey Report on the Quantity and Quality of Commodities
- Initial/Daily/Final Survey Report of Cargo discharged of loaded
- Sampling (survey) Report, etc.

Types of Certificates;
- Certificate of Quality and Quantity,
- Certificate of Analysis,
- Certificate of Sampling,
- Certificate of Hold's Cleanliness, etc.

Certifications are offered to banking and commercial interests as the supportive documentation for the sale of goods, mostly under the Letter of Credit.

Goods to be covered by surveys and inspections are:
- Commodities in bulk, bags or packed,
- Agricultural products,
- Ore and minerals,
- Machinery,
- Industrial goods, etc.

For the time being fertilizer and steel will represent 60% of the inspected commodity. Food stuffs in the range of 10-20%, while the rest are other various goods.

In the field of the surveying activity competitors of the ALPHA INSPECT are among the others:
- Societe Generate de Surveillance (SGS)
- Inchcape Testing Services
- Inspectorate, etc.

**Supervisory Board and Management**

ALPHA INSPECT is limited liability company by shares, fully owned by Mrs- Dr. Gordana Bival who is also Managing Director. Capt. Boris Bival is Co-ordination Manager in charge with all business activity and day-to-day operation. ALPHA INSPECT in Vienna is actually a continuation by experience of their firm CO-TRAN in Rijeka, Croatia, which was established in 1988 being the first, and for the period of time the only privately owned company in former Yugoslavia dealing with surveying and inspection services in domestic and international trade. This company is now part of ALPHA INSPECT network.

ALPHA INSPECT has about 20 different stations/offices (see attached List of Companies and Representative Offices). They have been founded and organized to offer the clients the flexibility in operations. Their geographic coverage ranges from Sevilla, Spain to Vladivostok, Russia and Shantou in China, as well as from Tallin, Estonia to Thessaloniki, Greece.

Head Office in Vienna Austria operates as any other business entity registered in Austria, under the valid taws and taxation regulations. ALPHA INSPECT is fully registered and the bookkeeping is entrusted to reputable bookkeeping company with the seat in Vienna.

Head Office organizes atl other stations/offices/companies in the places where the activity will be performed under the motto: "Flexibility and least possible administrative regulation on the places of the inspection and logistics".
 Clients

It is expected that ALPHA INSPECT will deal with some of clientele, which does not exclude future efforts in gaining new business partners. Actually, Company will not hesitated to improve its marketing activities from a very beginning, and to enlarge significantly the following list within next two years.

**COLOIDAL PALLADIUM MODIFIER: THEORY AND PRACTICAL APPLICATION FOR THE DETERMINATION OF ARSENIC, ANTIMONY AND LEAD IN A SPIKED SEA WATER BY ETAAS**

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**Keywords:** electrothermal atomic absorption spectrometry; chemical modifiers; colloidal palladium; antimony; arsenic; lead; sea water.

As is known, active forms of palladium modifier are elemental Pd, its oxide and intercalation compounds of palladium with graphite (see refs. in [1]). However, in most cases during analysis of complex samples palladium salts used as modifiers are transformed into the corresponding chlorides. Formation of palladium chlorides that cannot stabilize volatile analyte compounds during the pyrolysis stage seems to be the most widespread reason for low effectiveness of palladium modifiers sometimes reported.

Colloidal palladium modifier is much more robust in its action because it is not susceptible to interaction with chlorides of matrix during drying and pyrolysis stages [2]. Earlier high effectiveness of this modifier was demonstrated for some model systems [3]. In this work [4] we found that in the presence of colloidal palladium, interference-free determinations of As, Sb and Pb are possible up to at least 450 μg of chloride ion or 40 μg of sulphate ion (as their sodium salts) in the atomizer. Colloidal palladium was used for the direct determination of As, Sb and Pb in a spiked sea water sample (from Bosphorus channel near Istanbul) by means of the calibration graphs prepared with pure analyte solutions. The detection limits for As, Sb and Pb in a sea water matrix calculated according to 2σ criteria are 5.4 ng ml⁻¹, 3.6 ng ml⁻¹ and 1.1 ng ml⁻¹, respectively (for sample volume 10 μl). In unspiked sea water, the contents of As, Sb and Pb were found to be below the detection limits. Recoveries of spiked analytes (25 ng ml⁻¹ and 50 ng ml⁻¹) were in the region of 98-112% depending on the nature of analyte and the concentration of spike.

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