

Modular design of hydride trap-and-atomizer device for AAS is constructed and tested. Modular design enables to test different preconcentration surfaces easily. Efficient in-atomizer preconcentration allows to reach detection limits of hydride forming elements at ultratrace levels. Bismuth and arsenic were chosen as model analytes and their preconcentration efficiencies were quantified employing quartz and sapphire as preconcentration surfaces. The results reached in the modular design were compared to those found previously in the compact quartz trap-and-atomizer device. The performance of the modular design is fully comparable with that of compact trap-and-atomizer design. Modular design can thus be employed for testing of novel preconcentration surfaces.