

Purity Determination with Adiabatic Calorimeter

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Most of the analytical instruments require reliable calibration standards for the accurate quantitative determination. The raw materials of these calibration standards are mainly high purity materials whose purities are determined by the SI traceable primary method. Freezing point depression method is one of the primary methods for the determination of the purity traceable to the SI without any reference materials. We introduced an adiabatic calorimeter for this freezing point depression method. We have determined the purity of some high purity organic compounds with this adiabatic calorimeter, and supplied as CRMs with certified value of purity.



Adiabatic Calorimeter

EGA-MS Instrument with Skimmer Interface

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EGA-MS (Evolved Gas Analysis-Mass Spectrometry) instrument has been constructed with skimmer interface that is effective to measure adsorptive gaseous species and useful to infrared image furnace. The skimmer interface is based on the principle of a jet separator. Thus objective gaseous species with higher mass have been enriched because of the difference of diffusion velocity from helium with light mass. The apparatus has successfully analyzed carbon substances in materials by sol-gel processing.



Scheme of skimmer interface