Graphite Furnace Standards

Matrix Modifiers

HPS Matrix Modifiers are designed for use with Graphite Furnace Atomic Absorption (GFAAS). A matrix modifier is added to the sample to prevent analyte loss during the ashing step by converting the analyte to a less volatile form.

Catalog No.	Description
MM-9001	0.1% $NH_4H_2PO_4$ in 0.05% HNO_3
MM-9002	1% $NH_4H_2PO_4$ in 0.05% HNO_3
MM-9003	10% $NH_4H_2PO_4$ in 0.05% HNO_3
MM-9004	20% $NH_4H_2PO_4$ in 0.05% HNO_3
MM-9010	0.1% $Mg(NO_3)_2$ in 1% HNO_3
MM-9011	1% $Mg(NO_3)_2$ in 1% HNO_3
MM-9012	5% $Mg(NO_3)_2$ in 1% HNO_3
MM-9020	0.1% Pd in 10% HNO_3
MM-9023	0.5% Pd in 10% HNO_3
MM-9021	1% Pd in 10% HNO_3
MM-9022	2% Pd in 10% HNO_3
MM-9030	0.1% $Ni(NO_3)_2$ in 1% HNO_3
MM-9031	1% $Ni(NO_3)_2$ in 1% HNO_3
MM-9032	5% $Ni(NO_3)_2$ in 1% HNO_3
MM-9100	1000 µg Pd/mL - 600 µg $Mg(NO_3)_2$/mL in 10% HNO_3

Catalog No.	Description
MM-9040	0.1% NH_4NO_3 in H_2O
MM-9041	1% NH_4NO_3 in H_2O
MM-9042	5% NH_4NO_3 in H_2O
MM-9101	1500 µg Pd/mL - 1000 µg $Mg(NO_3)_2$/mL in 10% HNO_3
MM-9102	750 µg Pd/mL - 500 µg $Mg(NO_3)_2$/mL in 10%HNO_3
MM-9110	10,000 µg $NH_4H_2PO_4$/mL - 500 µg $Mg(NO_3)_2$/mL in 1% HNO_3

Flame AAS Standards

Ionization Buffers

Ionization Buffers are used to increase the free electron population in flame emission or absorption and thereby suppress ionization interference effects of many ions in high temperature flames such as nitrous oxide - acetylene. While the alkali metals are known to be ionized at various degrees, many metals including aluminum and silicon are ionized to an appreciable extent in a nitrous oxide - acetylene flame. Ionization buffers are always recommended with the nitrous oxide - acetylene flame. It is of interest to note that the ionization potential of lanthanum (5.6 eV) is very close to that of lithium (5.39 eV). Therefore, lanthanum acts as an ionization buffer as well as a releasing agent for the alkaline earth metals, silicon, and aluminum. The cesium ionization buffer is recommended by the manufacturers of the ICP and AAS instrumentation.

Catalog No.	Description
IB-CS-B1	1% Cesium in 1% HNO_3
IB-CS-B5	5% Cesium in 1% HNO_3
IB-K-A5	5% Potassium in 1% HCl
IB-K-B5	5% Potassium in 1% HNO_3
IB-LA-B5	5% Lanthanum in 1% HNO_3*
IB-LA-A1	1% Lanthanum in 1% HCl*
IB-LA-A5	5% Lanthanum in 1% HCL*

***Also used as releasing agents in flame AAS**