

Ionic Strength Adjustment Buffer



EDT directION manufacture a full range of standards, filling solutions and Ionic Strength Adjustment Buffers (ISABs). All ISE measurements require calibration using typically two standards plus the addition of an ISAB. Details of the type and concentration of standards and ISABs can be found in both the ISE instruction manual or the Application sheet where published.

Ionic Strength Adjustment Buffers (ISAB) are required for accurate Ion analysis using Ion Selective Electrodes (ISEs). Each ISAB has been specially formulated to allow the buffering of all samples and standards to the same Ionic Strength without interfering with the measurement. EDT directION ISABs come in 500ml leak-proof bottles with an inner seal. Typical addition is 2ml of ISAB to every 100ml of standard and sample.

The ionic strength of standards and samples are not the same thereby the ability of ions to freely move around varies from sample to sample. This means that the effective activity of ions will vary between these solutions. ISEs measure activity as they can only sense ions that come into contact with the sensor surface.

To ensure all ions have an equal probability of contacting the ISE the total Ionic Strength of all solutions should be equal (or as close as possible). This is achieved by adding a small volume of ISAB (Ionic Strength Adjustment Buffer) to a fixed volume of all standards and samples.

Each ISAB is carefully selected for each different ISE to ensure that the added ions do not interfere with the measurement but do have sufficient concentration to increase the overall Ionic strength to the desired level without diluting the solutions significantly.

Application methods from EDT directION are available (www.edt.co.uk). Specialist ISABs can also be used to equalize pH or remove interferences as required. For advice on these applications please contact our technical support team sales@edt.co.uk.

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30321	Ammonia ISAB	500ml	for use with Ammonia ISE Cat no.3302
30334	Ammonium ISAB	500ml	for use with Ammonium ISEs 1051,2051, 3051
30312	Barium ISAB	500ml	for use with Barium ISEs 1081,2081
30302	Bromide ISAB	500ml	for use with Bromide ISEs 1271,2271
30309	Cadmium ISAB	500ml	for use with Cadmium ISEs 1241,2241
30310	Calcium ISAB	500ml	for use with Calcium ISEs 1041,2041,3041
30323	Carbonate ISAB	500ml	for use with Carbonate ISEs 1091,2091
30301	Chloride ISAB	500ml	for use with Chloride ISEs 1261,2261,3261
30306	Copper ISAB	500ml	for use with Copper ISEs 1227,2227
30304	Cyanide ISAB	500ml	for use with Cyanide ISEs 1291,2291
30333	Fluoride TISAB	500ml	for use with Fluoride ISEs 1221,2221,3221,3221USB
30303	Iodide ISAB	500ml	for use with Iodide ISEs 1281,2281
30307	Lead ISAB	500ml	for use with Lead ISEs 1231,2231
30310	Mercury ISAB	500ml	for use with Mercury ISEs 1251,2251
30311	Nitrate ISAB	500ml	for use with Nitrate ISEs 1021,2021,3021
30324	Nitrite ISAB	500ml	for use with Nitrite ISEs 1071,2071
30304	Potassium ISAB	500ml	for use with Potassium ISEs 1031,2031,3031 and Sodium 3301PVC
30308	Silver ISAB	500ml	for use with Silver ISEs 1211,2211
30315	Sodium ISAB	500ml	for use with Glass Sodium ISE 3301G
30304	Sodium ISAB	500ml	for use with Sodium ISE 3301PVC
30302	Sulphide ISAB	500ml	for use with Sulphide ISEs 1225,2225
30332	Thiocyanate ISAB	500ml	for use with Thiocyanate ISEs 1229,2229

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