

## Calibration and Services Refractometer Calibration



### AG Fluids

AG Fluids are an organic solution calibrated in °Brix and RI and have a long shelf life. Having a low °Brix/RI value, AG fluids provide a low cost alternative to sucrose solutions especially as they can be supplied in multi-packs of 5 or 20 5ml bottles, reducing the per bottle shipping cost. Multipacks are supplied with certificate of calibration, MSDS data and pipettes. They have no special storage or transit requirements and are therefore easy to ship and store.



AG Fluids are manufactured on a %weight/weight basis in a UKAS laboratory using only the highest quality chemicals and Analar® distilled water. Manufactured in large batches, the resultant samples are checked using a controlled refractometer that has been carefully calibrated with NIST and PTB primary standards, providing further traceability.

However, AG Fluids have a refractive index/temperature co-efficient that is not the same as sucrose and so cannot easily be used on refractometers using sucrose temperature compensation. For further advise on the use of AG fluids, contact the Sales Team or use the FAQ system to determine whether AG Fluids can be used on a particular refractometer.

AG Fluids are especially suited for calibrating refractometers used as part of a system to determine **alcohol in beer and wine** as well as for instruments used in the **beverage packaging industry**.

Order Code			Type	Specification	
Single 5ml Bottle	Multi-pack of 5 x 5ml Bottle	Multi-pack of 20 x 5ml Bottles		Refractive Index*	°Brix**
90-401	90-501	90-601	AG2.5	1.33659	2.50
90-402	90-502	90-602	AG5	1.34026	5.00
90-403	90-503	90-603	AG7.5	1.34401	7.50
90-404	90-504	90-604	AG10	1.34782	10.00
90-405	90-505	90-605	AG11.2	1.34968	11.20
90-406	90-506	90-606	AG12	1.35093	12.00
90-407	90-507	90-607	AG12.5	1.35171	12.50
90-408	90-508	90-608	AG15	1.35568	15.00
90-418	90-518	90-618	AG40	1.39986	40.00

Maximum Uncertainty:  $\pm 0.000037$  RI  $\pm 0.019$  °Brix  
Traceable to NIST.

#### Note:

\* Precise refractive index @ 589.3nm & 20.0°C.

\*\* Equivalent °Brix value @ 589.3nm & 20.0°C.

#### Uncertainties:

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement in units of °Brix (equivalent to weight % sucrose in water) multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with publication EA-4/02.