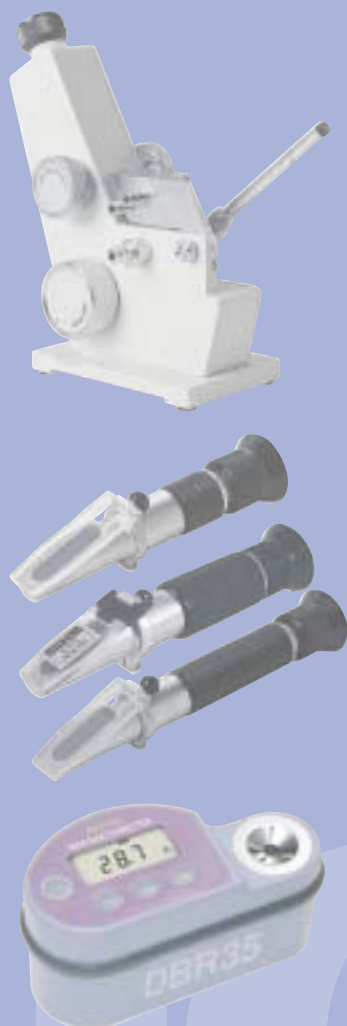


Paragon Scientific Ltd

STANDARD RIFRATTOMETRICI CERTIFICATI DI SACCAROSIO



Paragon Scientific Ltd produce una gamma di standard primari certificati di saccarosio ad elevata accuratezza per la taratura di tutti i tipi di rifrattometri portatili, di Abbe e digitali. Questi standard sono certificati UKAS in accordo alle normative ISO/IEC 17025. La stabilità di questi standard, senza conservanti, è garantita per 6 settimane dalla data di produzione.

Codice	Valore certificato % Brix $\pm 0,02\%$ a 20 °C	Indice di rifrazione nD	Confezione
45000013	0,00	1,33299	1 x 15 ml
45000023	5,00	1,34026	1 x 15 ml
45000033	10,00	1,34782	1 x 15 ml
45000043	15,00	1,35568	1 x 15 ml
45000053	20,00	1,36384	1 x 15 ml
45000063	25,00	1,37233	1 x 15 ml
45000073	30,00	1,38115	1 x 15 ml
45000083	35,00	1,39032	1 x 15 ml
45000093	40,00	1,39986	1 x 15 ml
45000103	50,00	1,42009	1 x 15 ml
45000113	60,00	1,44193	1 x 15 ml

La Giorgio Bormac è in grado di pianificare forniture mensili.

Codice	Kit n°	Confezione (1 x 15 ml per valore)
45000203	Kit 1	0,00% + 5,00%
45000213	Kit 2	0,00% + 10,00%
45000223	Kit 3	0,00% + 15,00%
45000233	Kit 4	0,00% + 20,00%
45000243	Kit 5	0,00% + 25,00%
45000253	Kit 6	0,00% + 30,00%
45000263	Kit 7	0,00% + 35,00%
45000273	Kit 8	0,00% + 40,00%
45000283	Kit 9	0,00% + 50,00%
45000293	Kit 10	0,00% + 60,00%
45000303	Kit 35*	0,00% + 5,00% + 10,00% 25,00% + 35,00%
45000313	Kit 60*	0,00% + 15,00% + 40,00% 50,00% + 60,00%


* n° 2 flaconi da 0,00%

 European co-operation for Accreditation	
 UNITED KINGDOM Metro Calibration Service (2003) 1500	 BELGIUM Service de la Mesure 2003
 IRELAND Irish Laboratory Accreditation Board (SIAM) 1000	 SWITZERLAND Swiss Calibration Service (SAS) 1000
 ITALY Servizio di Taratura e Scale (SIT) 1000	 FEDERAL REPUBLIC OF GERMANY Technische Dienstleistung (TND) 1001
 NETHERLANDS Nederlandse Calibration Service (NCS) 1000	 Denmark The National of Denmark
 NORWAY Norwegian Calibration Service (NCS) 1000	 Spain Servicio de Calibración (SIC) 1000
 PORTUGAL Calibrações Instituídas por Quilómetros (CIQ)	 FINLAND Finnish Metro Services (FMS) 1000
 SWEDEN Swedish Metrology Organisation (SMT) 1000	 FRANCE Service de la d'Etalonnage
 AUSTRIA Österreichischer Kalibrierdienst (ÖKD) 1000	

CERTIFICATE OF CALIBRATION


ISSUED BY PARAGON SCIENTIFIC LIMITED

Date of issue 8-Oct-02 Certificate Number 37544



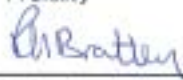
UKAS-accredited calibration laboratory no. 8649 accredited to ISO/IEC 17025

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0649

Page 1 of 1 pages
Approved Signatory
P. Bratley

Name: _____
Signature: 

Product Identity: SS30	Date of manufacture: 7-Oct-02
Batch Number: 37536_18830	Expiry date: 18-Nov-02

% Sucrose (C₁₂H₂₂O₁₁) in water wt/wt : 30.00 (+ / - 0.02%)
(30 % Brix @ 20 °C)
Refractive Index: 1.38115 (+ / - 0.00004)

Traceability data
Preparation method
 This standard was prepared wt/wt (Brix) sucrose / water on a high accuracy calibrated analytical balance. The concentration was verified using a primary high accuracy, calibrated Refractometer.

Balance
 Balance Calibration date: 26-Mar-02

The Analytical grade reagents used in the manufacture of this high accuracy standard are defined as:
 Analytical Grade Sugar (C₁₂H₂₂O₁₁) Analytical Grade Water (H₂O)

Sucrose batch no: 0107303	Water batch no: 0258380
Sucrose expiry date: 17-Aug-06	Water expiry date: 31-Dec-02

Uncertainties
Uncertainties for the production of this refractive index standard are:
 Combined Standard Uncertainty: 0.008%
 Expanded Uncertainty: 0.016%
 The reported expanded uncertainty is based on a combined standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%. The evaluation has been carried out in accordance with UKAS requirements.

Testing equipment (verification)
 Refractometer Serial No: A82323
 The uncertainty of temperature measurement for the verification equipment used in this analytical procedure does not exceed +/- 0.1 °C

Recommendations for use
 The standard must be shaken thoroughly to ensure homogenous mix of the solution. If the solution is in a dropper bottle, remove the seal, invert the bottle and discharge a few drops of solution to waste to clear the nozzle. Apply to the refractometer prism surface in accordance with the manufacturer's instructions. After application, immediately replace the cap to prevent evaporation or contamination. Standards should be kept refrigerated at 2 to 5 °C – do not freeze.

Health and safety
 This standard is composed solely of sucrose and water without any additives. In the quantity supplied it represents no hazard to health in respect of skin contact or ingestion. If the eyes are affected, flush with clean water. (Health and Safety is not covered by our UKAS accreditation)

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom accreditation service. It provides traceability of measurement to recognised national standards, and to units of measurement realised at the National Physical Laboratory or other recognised national standards laboratories. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory. UKAS is one of the signatories to the Multilateral Agreement of European co-operation for Accreditation (EA) for the mutual recognition of calibration certificates issued by accredited laboratories



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