

**CERTIFIED  
REFERENCE  
MATERIAL:**  
MANUFACTURED,  
TESTED  
AND STORED IN  
ACCORDANCE WITH  
ISO REQUIREMENTS  
**ISO 17025 AND  
ISO 17034**



Certified Reference  
Material in Accordance  
with ISO 17025 and  
ISO 17034

# Only the Best Standards for Supreme Quality Control

## **BETTER QUALITY CONTROL – FOR A BETTER ENDPRODUCT**

Density measurements safeguard quality throughout your production process so final products are in-spec. At the end of the day, the quality of your density measurements determines the quality of your final products.

## **GET THE MOST OUT OF YOUR DENSITY METER**

Each density meter – no matter the manufacturer – may be exposed to conditions influencing the measuring accuracy. But if you regularly calibrate and adjust your instrument with a standard specified as 3x better than the instrument, your measurements will always be as accurate as on the very first day.

## **COUNT ON NOTHING-BUT-THE-BEST**

Rely on our unique combination of minimal uncertainty built on reference to our hydrostatic balance, and continuous monitoring via ISO 17034 accreditation, to ensure your measurements are always of the highest quality.

SHOP NOW



[www.anton-paar.com/density-standards](http://www.anton-paar.com/density-standards)



**Market-leading uncertainty of  
0.015 kg/m<sup>3</sup> (ISO 17034)**

**Application-specific standards,  
from 750 kg/m<sup>3</sup> to 1250 kg/m<sup>3</sup>**

**Online certificate with values  
guaranteed throughout lifetime**

**Conformity with ISO 17025  
and even ISO 17034**

**Safety glass ampoule for zero  
contamination**

 **BUY ONLINE**  
[shop.anton-paar.com](http://shop.anton-paar.com)

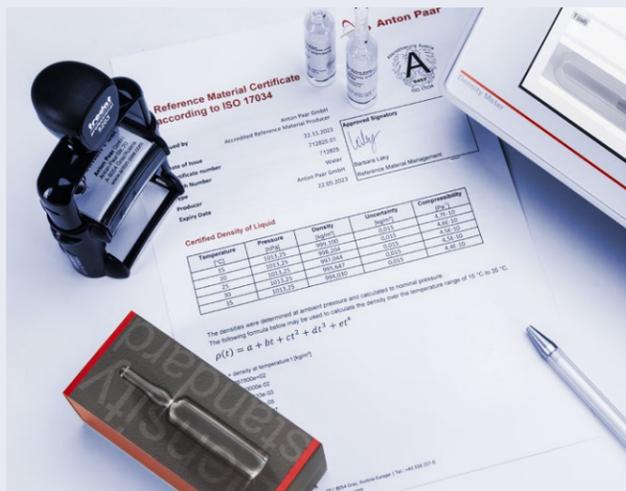
# Density Masterminds

## Always at Your Service

**OUR CUSTOMERS KNOW: WE'RE THE GLOBAL MASTERMINDS OF DIGITAL DENSITY MEASUREMENT, LEADING THE MARKET FOR MORE THAN 50 YEARS, SINCE WE INVENTED THE FIRST DIGITAL DENSITY METER IN 1967. WITH OUR STATE-OF-THE-ART WEIGHING APPARATUS AND ISO 17034 ACCREDITATION, WE'RE NOW READY TO OFFER YOU A TOP-NOTCH PACKAGE:**

- The most accurate and fastest digital density meter on the global market with a three-year standard warranty.
- Density reference material, available at a click, to keep the quality of your measurements as high as on the very first day.
- An internationally recognized ISO 17025 calibration certificate confirming the accuracy and traceability of your density meter, either with the instrument or acquired right there in your lab.
- Comprehensive on-site calibration and maintenance by trained service technicians – individually arranged via maintenance contract or on-demand service visits.

**IT'S A ONE-STOP SHOP**



### ISO 17034-CERTIFIED REFERENCE MATERIAL

Accreditation to ISO 17034 is legal proof that our density standards are traceable to the International System of Units (SI). ISO 17034 requirements always include those of ISO 17025: Our certified reference materials conform with both ISO standards. Our reference material laboratory works independently and impartially, and is regularly audited by the Austrian accreditation body.



### ONLINE CERTIFICATE, AND REFERENCE VALUES WITH LIFETIME-GUARANTEE

In contrast to standards that are only ISO 17025-certified – and therefore just assumed to be stable, without long-term proof – each batch of our standards is measured once every three months throughout the complete lifetime, so the stated density is continuously monitored and guaranteed. This means our digital, online certificates are always up to date. All paperwork is stored safely with zero effort at your end, and you're informed directly in case of discrepancies.



### APPLICATION-SPECIFIC STANDARDS WITH LOW UNCERTAINTY

In addition to the super-low uncertainty associated with the reference method, our standard's specified expanded uncertainty of 0.015 kg/m<sup>3</sup> to 0.03 kg/m<sup>3</sup> comprises homogeneity, long-term stability and short-term stability with regard to shipment. We offer only liquids that are stable, easy to handle, non-toxic, and safe. Choose a standard to individually represent your application. Whether organic, aqueous, or viscous, you'll find your match.



### EASY CLICK OPENING, ZERO EXCHANGE WITH AMBIENT CONDITIONS

To retain the low level of uncertainty and prevent exchange with ambient conditions, which could cause composition variation and quality loss, we rely on 10 mL glass ampoules dedicated for single usage. The ampoule is closed via a sealed safety-glass cap with a shatterproof breaking point, and is openable at a simple finger-press click. You can always be sure that the content exactly corresponds to the values specified on the certificate.

# Trace Your Density Measurements to the Primary Method

Anton Paar's engineers have developed an automated hydrostatic weighing apparatus, drawing from their unmatched expertise in density and temperature measurement.

Hydrostatic weighing is an absolute method (primary method) to determine liquid density. A sinker – usually a sphere with well-known volume and mass – is immersed in the liquid being tested and appears to lose weight depending on the liquid. Its apparent loss of mass – or buoyancy – is equivalent to the mass of the displaced liquid. Exact knowledge of this mass and volume, along with weighing of the apparent mass of the sphere, allow the density of the liquid to be determined.

**IN MEASURING OUR DENSITY STANDARDS VIA THE PRIMARY METHOD, WE GUARANTEE THE HIGHEST POSSIBLE ACCURACY – IN FACT, IT'S AS ACCURATE AS NATIONAL METROLOGY INSTITUTE VALUES.**

## TECHNICAL SPECIFICATIONS

The composition, type, and density range of your ideal reference material individually corresponds to your application. Select a suitable standard from our portfolio:

| YOU'RE SEARCHING FOR ...   | DODECANE                          | OIL 30 CST @40 °C        | WATER <span style="color: red; font-weight: bold; border: 1px solid red; border-radius: 50%; padding: 2px;">TOP SELLER</span> | GLUCOSE/WATER 10 %       | SODIUM BROMIDE           |
|--|-----------------------------------|--------------------------|---|--------------------------|--------------------------|
| Liquid easy to handle  | ✓                                 | ✓                        | ✓   | ✓                        | ✓                        |
| Non-toxic liquid   | ✓                                 | ✓                        | ✓   | ✓                        | ✓                        |
| Liquid with low density  | ✓                                 | ✓                        |   |                          |                          |
| Liquid with high density   |                                   |                          |   |                          | ✓                        |
| Organic liquid   | ✓                                 | ✓                        |   |                          |                          |
| Aqueous liquid   |                                   |                          | ✓   | ✓                        | ✓                        |
| Viscous liquid   |                                   | ✓                        |   |                          |                          |
| <b>WEBSHOP PART NUMBER</b>                                       | 242811                            | 242814                   | 242815  | 242817                   | 242818                   |
| <b>SPECIFICATIONS</b>  |                                   |                          |   |                          |                          |
| Density at 20 °C   | 750 kg/m <sup>3</sup>             | 830 kg/m <sup>3</sup>    | 998 kg/m <sup>3</sup>   | 1040 kg/m <sup>3</sup>   | 1250 kg/m <sup>3</sup>   |
| Specified temperature range                                      | 15 °C to 50 °C                    | 15 °C to 50 °C           | 15 °C to 35 °C  | 15 °C to 25 °C           | 15 °C to 25 °C           |
| Expanded uncertainty*  | 0.015 kg/m <sup>3</sup>           | 0.015 kg/m <sup>3</sup>  | 0.015 kg/m <sup>3</sup>   | 0.02 kg/m <sup>3</sup>   | 0.03 kg/m <sup>3</sup>   |
| Expanded uncertainty* of reference method (hydrostatic weighing) | ≤0.003 kg/m <sup>3</sup>          | ≤0.004 kg/m <sup>3</sup> | ≤0.003 kg/m <sup>3</sup>  | ≤0.004 kg/m <sup>3</sup> | ≤0.004 kg/m <sup>3</sup> |
| Durability   | 18 months, continuously monitored |                          |   |                          |                          |
| Ampoule cap  | Safety glass; sealed              |                          |   |                          |                          |
| Volume   | 10 mL                             |                          |   |                          |                          |

\* Based on a combined standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approx. 95 %

