



TORONTECH

SALINITY OPTICAL REFRACTOMETER



Salinity Optical Refractometer – ToronOR™ S Series

A Salinity Refractometer in the ToronOR™ S Series is a handheld Optical Refractometer designed for quick salt concentration checks in salt water, brine, aquariums, marine monitoring, and laboratory quality-control work. The ToronOR™ S series cover broad salinity ranges, seawater-focused ranges, and a combo Brix/salinity format, so users can choose between general salt measurement and more application-specific screening.

An Optical Refractometer measures how light bends through a liquid sample, then converts that optical change into a direct reading on a scale inside the eyepiece. In the ToronOR™ S Series, the scales are configured for salinity-related values such as percent salinity, parts per thousand, and specific gravity, which makes the result easier to interpret for salt-water applications than a general refractive-index-only instrument. The ToronOR™ S Series useful for salt water and brine testing rather than general food, beverage, or automotive fluid measurement.

This is what makes a Salinity Refractometer different from a regular refractometer. A general refractometer may show Brix or refractive index only, while these models are scaled for salinity and, in some cases, seawater-style specific gravity. That direct-read format is useful for aquariums, marine water checks, brine monitoring, and similar field work where a fast visual reading matters.

APPLICATIONS

Salinity Optical Refractometer – ToronOR™ S Series Application

- Aquarium and marine water monitoring: The ToronOR™ S Series models as ideal for aquariums and marine monitoring. This makes them suitable for checking salt concentration and specific gravity in marine tanks, aquaculture systems, and artificial seawater preparation. The broad-range and seawater-range models allow users to match the instrument to either mixed salt solutions or a narrower seawater operating band.

- Brine concentration checks: Each ToronOR™ S Series is suitable for testing the concentration of salt water and brine. This makes the series useful in food processing, salt solution preparation, industrial fluid checks, and any workflow where brine concentration needs a quick field reading.
- Research and laboratory quality control: Quality control in research and clinical laboratories. In practice, these models fit routine screening when operators need a direct salinity or specific-gravity reading without a digital meter or benchtop refractometer.
- Dual sugar-and-salt process checks: The ToronOR™ S10 model adds a Brix scale alongside salinity and specific gravity. That makes it the better fit for users who want one handheld Refractometer for low-range sugar solutions and salt concentration checks in mixed process environments.



Standards

- EN 61000-6-1: 2007
- EN 61000-3-2: 2014
- EN 61000-3-3: 2013
- EN 61000-6-3: 2007+A1:2011+AC:2012
- EN 61000-4-2: 2009
- EN 61000-4-3: 2006+A1:2008+A2:2010
- EN 61000-4-4: 2012
- EN 61000-4-5: 2014
- EN 61000-4-6: 2014
- EN 61000-4-8: 2010
- EN 61000-4-11: 2004

FEATURES

Salinity Optical Refractometer – ToronOR™ S Series Key Features

- Handheld analog Optical Refractometer lineup for salt water, brine, aquarium, and marine monitoring applications.
- Direct-reading salinity scales in % salinity, ppt, and specific gravity, depending on model.
- Pure aluminum body construction.
- Ambient-light operation with no battery or external power required.
- Easy manual focus and calibration for routine use.
- Soft, comfortable non-slip rubber grip.
- Salinity Refractometer function for more convenient routine measurement. The ToronOR™ S10 showing 10°C to 30°C and ToronOR™ S4 showing 0°C to 30°C.

- Durable manual construction with a standard accessory set including pipette, screwdriver, case, manual, and cleaning cloth.

THEORY & METHOD

Theory and Method

Each handheld Salinity Refractometer uses a prism and ambient light to produce a light/dark boundary visible through the eyepiece. A few drops of sample are placed on the prism, the cover plate is closed, and the reading is taken directly from the salinity, ppt, or specific-gravity scale. This optical approach is the same general principle used across manual refractometers, with the key difference here being the salinity-focused calibration of the internal scale.

The ToronOR™ S Series do not require a battery or external power source. That makes them well suited to field use where quick checks matter more than a digital logging workflow.

TECHNICAL SPECIFICATIONS

Salinity Optical Refractometer – ToronOR™ S Series Technical Specification

Model	What this model is for	Scale details	Best-fit use case	Common build / package details
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Toron OR™ S4	A narrow-range seawater salinity refractometer focused on the band most relevant to marine water and aquarium work.	Salinity 2–4% (20–40 ppt) and Specific Gravity 1.015–1.030 SG. 0.1% (1 ppt) salinity and 0.001 SG specific-gravity resolution, with corresponding $\pm 0.1\%$ (1 ppt) and ± 0.001 SG accuracy values. Dimensions are 195 × 32 × 32 mm and net weight is 148 g.	Best for aquariums, reef systems, and marine monitoring where the operator wants better scale focus around typical seawater concentration instead of a broader salt range.	Pure aluminum body, ATC 0°C–30°C, ambient-light operation, package includes refractometer, pipette, mini screwdriver, protective case, manual, and cleaning cloth. Package weight is 303 g.
Toron OR™ S10	A combo Brix and salinity refractometer for users who want one tool for low-range sugar and salt checks. This is the most versatile model in this small series because it combines two measurement types in one handheld instrument.	0–10% Brix, 0–10% Salinity, SG 1.000–1.070. 0.1% Brix / 0.1 salinity and $\pm 0.10\%$ Brix / $\pm 0.10\%$ salinity, although the labels appear to swap accuracy and resolution wording. Dimensions are 170 × 32 × 32 mm and net weight is 148 g.	Best for users who need to switch between low-range sugar solution checks and salt concentration checks in one instrument, such as mixed process, lab-prep, or specialty solution work.	Pure aluminum body, ATC 10°C–30°C, ambient-light operation, standard kit with refractometer, pipette, mini screwdriver, protective case, manual, and cleaning cloth. Package weight is 302 g.
Toron OR™ S15	A wide-range salinity refractometer for salt water and brine testing where a broader salinity span is preferred. Like ToronOR™ S40 it is positioned for aquariums, marine monitoring, and research or clinical lab quality control.	0–10% salinity and 1.000–1.070 RI/SG-style scale as shown in the title. The measurement span, but the extracted detailed spec block was not visible in the lines I reviewed.	Best for users handling broader brine concentration ranges where the narrower seawater would be too limited.	Pure aluminum construction and standard package sets . Package includes refractometer, pipette, mini screwdriver, protective case, manual, and cleaning cloth.
Toron OR™ S40	A broad-range salinity refractometer for general salt water and brine testing.	0–4% salinity, 0–40 ppt, SG 1.000–1.030.	Best for users who want a general marine and brine model with a full seawater-style salinity range rather than a narrower band.	Pure aluminum construction and standard package sets . Package includes refractometer, pipette, mini screwdriver, protective case, manual, and cleaning cloth.



Torontech Inc.

251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada 

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC

601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA 

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE

Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE 

Phone: +971 488 19252
Email: me@torontech.com

