The easiest and most innovative method for the study of exhaled breath condensate

- Reproducible, reliable results
- Sealable condensation tube is easily shipped in the mail for centralized sample analysis;
- Disposable design ensures a clean device ready for use at any time
- No centrifuge needed!
- Single-use design

Applications

- Pneumology
- Occupational Health

Exhaled breath condensation is a non-invasive method of gathering exhaled breath samples useful for assessing a number of disease parameters. The RTube is designed to provide maximum sample collection in minimal time.

Exhaled air is directed through a unique one-way valve and into a cooled collection chamber where vapors, aerosols and moisture in the breath condense along the protected inside walls of the RTube. The one way valve is then used as a plunger that collects droplets stuck to the inside wall and holds the sample near the top of the RTube.

The RTube is designed as a disposable, single use item. The cooling sleeve, the insulating cover and the plungers are fully reusable. A key feature is the ability to collect the condensate sample, store the sample, transport the sample, and analyze the sample all in the same RTube. These samples can be easily collected unsupervised in the subjects’ homes or worksites and naturally lend themselves to occupational medicine and toxicology research.

Also, due to recent FDA requirements it is believed that objective measurements of airway inflammation, such as those found in Exhaled Breath Condensates, will soon become important for clinical studies designed to measure the efficacy of anti-inflammatory medication.
The patient should begin breathing in and out through the mouthpiece with the tube pointing upward. Recommended collection time ranges from five to seven minutes for most applications.

### Technical Specifications

#### Main Features
- **Duration of collection**: 7 min. (Adults); 10 min. (Child)
- **Volume of condensate collected**: 1000 microliters (Adult); 700 microliters (Child)
- **Collection Temperature**: -20°C
- **Flow Resistance**: 0.20 cm H2O/liter

#### Physical specifications
- **Envelope dimensions**: 22.2 cm. tall x 2.6 cm. wide x 2.6 cm. long (RTube transportable cartridge)
- **Weight**: 17 grams

#### Environmental Conditions
- **Temperature**:
  - 0°C to 35°C (Non-climate controlled)
  - 15°C to 25°C (Climate Controlled)
- **Humidity**:
  - 10% to 90% (Non-climate controlled)
  - 20% to 80% (Climate Controlled)

#### Safety & Quality Standards
- CE Mark: CE Marked under the Medical Device Directive (93/42/EEC) and the Vitro Diagnostic Directive (98/79 EC)

### Bibliography