

# PORTABLE DEUTERIUM OXIDE SAMPLER

Model Series ~ D<sub>2</sub>O

Models - D<sub>2</sub>O-STA (Standard) and D<sub>2</sub>O-FTA (Flow Through)

## FEATURES:

- D<sub>2</sub>O-STA STANDARD SAMPLER
- PORTABLE
- DETECTS DEUTERIUM OXIDE IN WATER
- INFRARED SPECTROMETRY
- ATTENUATED TOTAL REFLECTANCE (ATR)
- TOUCH PANEL DISPLAY
- D<sub>2</sub>O-STA SAMPLER with TA SPECIFIC SOFTWARE
- AC POWER WITH RECHARGEABLE BATTERY BACK UP
- QUICK-SNAP SAMPLING MODULE
- 10 YEAR LASER WARRANTY
- SMALL AND LIGHTWEIGHT
- COMPUTER INTERFACE
- **OPTIONAL** FLOW THROUGH FEATURE – D<sub>2</sub>O-FTA



**D<sub>2</sub>O-STA SAMPLER  
WITH DISPLAY**

## APPLICATION:

Water. Liquid, or Gas sampler for Deuterium Oxide concentration. Use in a lab, NPP, glovebox, fume hood, etc. Model D<sub>2</sub>O-STA has a 10 year-warranty on defects on parts or laser.

## DESCRIPTION:

- Easy setup.
- No sample preparation required.
- Measures quantity of regular water mixed with heavy water (Deuterium Oxide).
- Small size allows positioning inside glove box or fume hood.

Technical Associates provides and supports a portfolio of fully integrated solutions for accurate analysis of liquid gas and solid substances including the optimal analytical FT-IR technology to identify, measure, categorize substances in many applications such as R&D, QC and process control.

FT-IR spectrometers offer many advantages over other analysis techniques. Most importantly, a drastic reduction of the time needed for data acquisition, component specificity and sensitivity.



**TECHNICAL ASSOCIATES**

7051 ETON AVENUE, CANOGA PARK, CALIFORNIA 91303

PHONE: 818-883-7043 | FAX: 818-883-6103

SALES@TECH-ASSOCIATES.COM | TECH-ASSOCIATES.COM | USNUCLEARCORP.COM

DIVISION OF



USNUCLEARCORP

OTCOB-UCLC

# PORTABLE DEUTERIUM OXIDE SAMPLER

## Model Series ~ D<sub>2</sub>O

### Models - D<sub>2</sub>O-STA (Standard) and D<sub>2</sub>O-FTA (Flow Through)

- **SPECIFICATIONS:**

- **Detector:** High sensitivity temperature-controlled DLaTGS detector. (Deuterated lanthanum triglycine sulfate).
- **QuickSnap™** Easy sampling module: Platinum-ATR: Single reflection ATR with monolithic diamond, soldered in tungsten carbide hard metal for highest mechanical and chemical robustness; **optional** heating function.
- **Life Time:** >10 years
- **Optics:** Sealed and desiccated; Mirrors: Gold coated for highest efficiency in the Mid-IR spectral range; KBr windows and beamsplitter; **Optics** with ZnSe beamsplitter and ZnSe windows  
**Option** “High Humidity”
- **Calibration Laser:** Diode laser with high wavenumber accuracy and precision
- **Life Time:** >10 years) and low power consumption.
- **Wavenumber precision:** Repeatability <0.0005 cm<sup>-1</sup> @ 2,000 cm<sup>-1</sup>  
(standard deviation of 10 repeated measurements)
- **Wavenumber accuracy:** <0.05 cm<sup>-1</sup> @ 2,000 cm<sup>-1</sup>
- **Photometric Accuracy:** Better than 0.1% T
- **Spectral Range:** 350 – 8,000 cm<sup>-1</sup>, with standard KBr beam splitter  
500 – 6,000 cm<sup>-1</sup>, option: „High Humidity“ ZnSe optics
- **Spectral resolution:** Better than 2 cm<sup>-1</sup>, optional better than 0.75 cm<sup>-1</sup>  
free adjustable resolution from 0.75 cm<sup>-1</sup> to 256 cm<sup>-1</sup>
- **Measurement Time:** 1 min, spectral resolution 4 cm<sup>-1</sup>
- **Measurement Ratio:** **D<sub>2</sub>O – H<sub>2</sub>O – any ratio up to 100%**  
**Optional: H<sub>3</sub> in D<sub>2</sub>O – any ratio up to 100%**
- **Power Requirements:** Standard rechargeable batteries. **Optional** AC
- **Computer interface:** Integrated touch panel pc (**option**),  
remote control via WLAN (**option**, e.g. for use in glove box)
- **Operating system:** Windows 7, Windows 10
- **Dimensions:** D<sub>2</sub>O-STA - approx. 8.2 in x 13.4 in x 13.4 in (26 x 34 x 34 cm)
- **Weight:** Approx. 22 lbs. (10 kg)

- **OPTIONAL FLOW THROUGH FEATURE**



TECHNICAL ASSOCIATES

7051 ETON AVENUE, CANOGA PARK, CALIFORNIA 91303

PHONE: 818-883-7043 | FAX: 818-883-6103

SALES@TECH-ASSOCIATES.COM | TECH-ASSOCIATES.COM | USNUCLEARCORP.COM

DIVISION OF



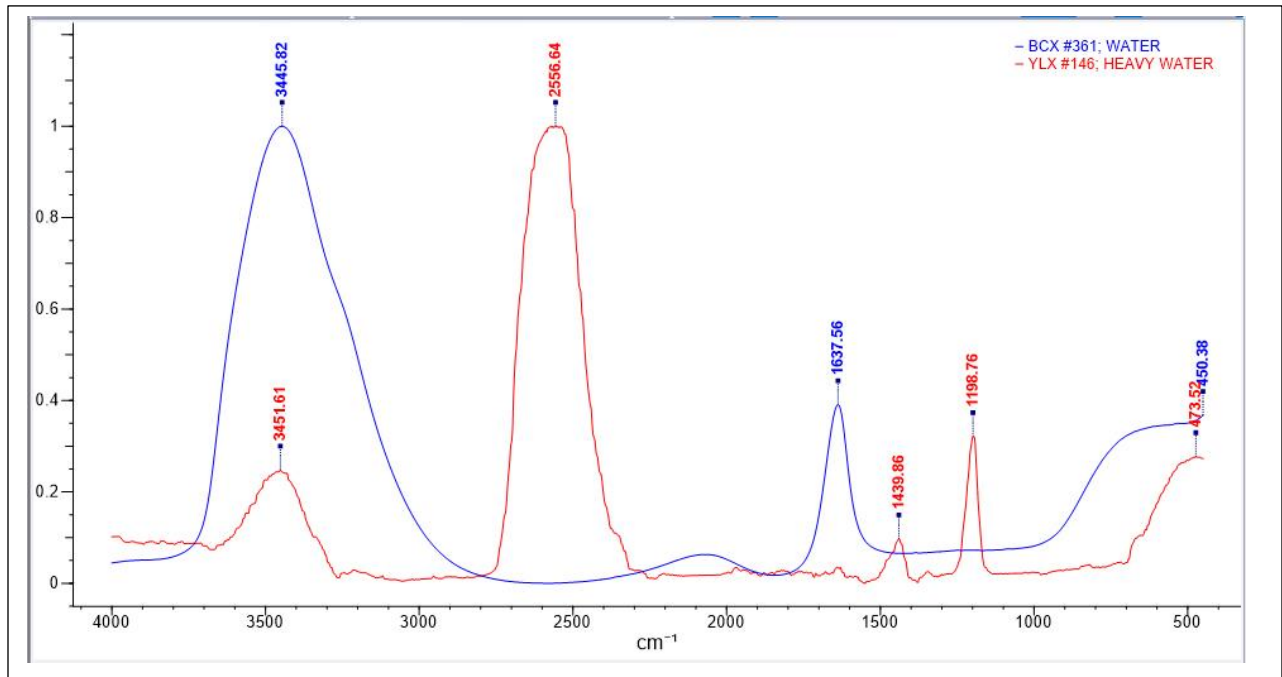
USNUCLEARCORP

OTCQB-UCLF

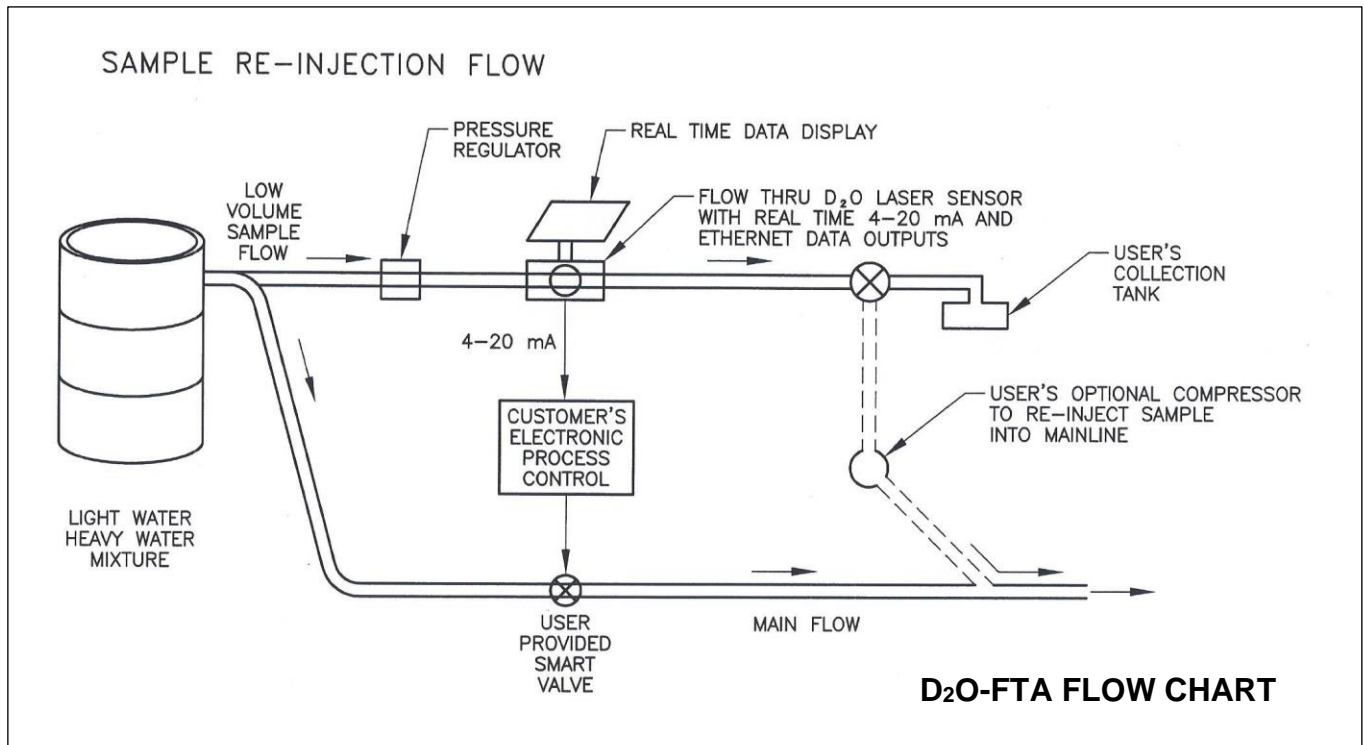
# PORTABLE DEUTERIUM OXIDE SAMPLER

Model Series ~ D<sub>2</sub>O

Models - D<sub>2</sub>O-STA (Standard) and D<sub>2</sub>O-FTA (Flow Through)



DEUTERIUM OXIDE GRAPH EXAMPLE



TECHNICAL ASSOCIATES

7051 ETON AVENUE, CANOGA PARK, CALIFORNIA 91303

PHONE: 818-883-7043 | FAX: 818-883-6103

SALES@TECH-ASSOCIATES.COM | TECH-ASSOCIATES.COM | USNUCLEARCORP.COM

DIVISION OF



OTCQB-UCLF