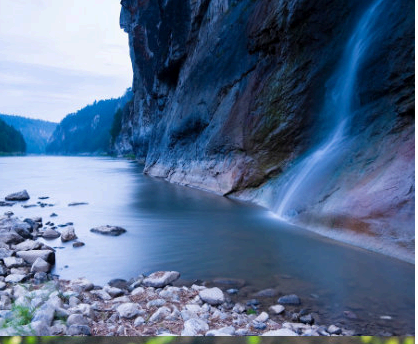
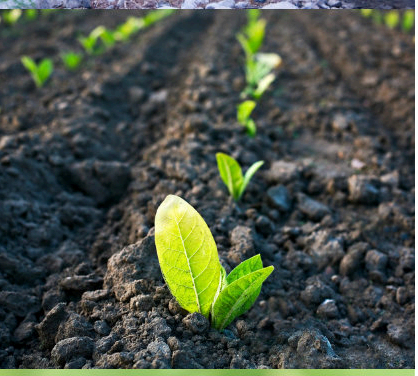
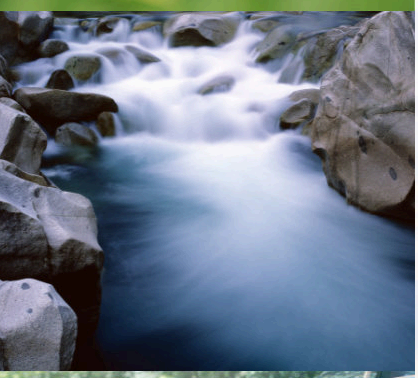






SEAL Analytical

DEENA 4

AUTOMATED METALS DIGESTION AND SAMPLE PREPARATION

RELIABLE METALS DIGESTION

- ***AUTOMATED***
  - ***Dispense***
  - ***Mix***
  - ***Heat***
  - ***Fill to volume***

UNIQUE BENEFITS

- 60 positions for 50ml vials
- Heat to 200° C
- No cross contamination
- No manual acid handling
- Internal air purge
- Carbon fiber arm
- Vial sensor

Suitable for EPA Approved Methods

200.2, 200.7, 200.8, 245.1
3050B, 7470A, 7471A

DEENA 4

AUTOMATION

The DEENA 4 is the latest in SEAL Analytical's series of automated sample digestion systems. The DEENA will accurately dispense desired reagent volumes into sample tubes, the contents are mixed thoroughly by shaking, and evenly heated in the graphite block. Following digestion, samples are filled to volume. Automating this procedure ensures reliable, consistent digestions which minimizes human error and eliminates repeated pipetting.

SAFETY

SEAL's automated digestion system significantly increases laboratory safety by eliminating the manual dispensing of corrosive acids and other dangerous reagents. Prior to any reagent dispense, the vial sensor confirms each sample tube has been placed on the instrument. The vial sensor, combined with encoded motors on the x and y axis, ensure the reagents are accurately dispensed into each vial. Following the completed digestion, the system raises the sample racks out of the heated block to cool before running a fill-to-volume function. The analyst simply needs to remove the completed racks from the DEENA 4 for analysis.

The optional, self-contained fume hood efficiently extracts corrosive acid fumes. It also frees up valuable fume hood space by allowing the DEENA to operate on a standard benchtop.

DURABILITY

FOR TRACE METAL ANALYSIS

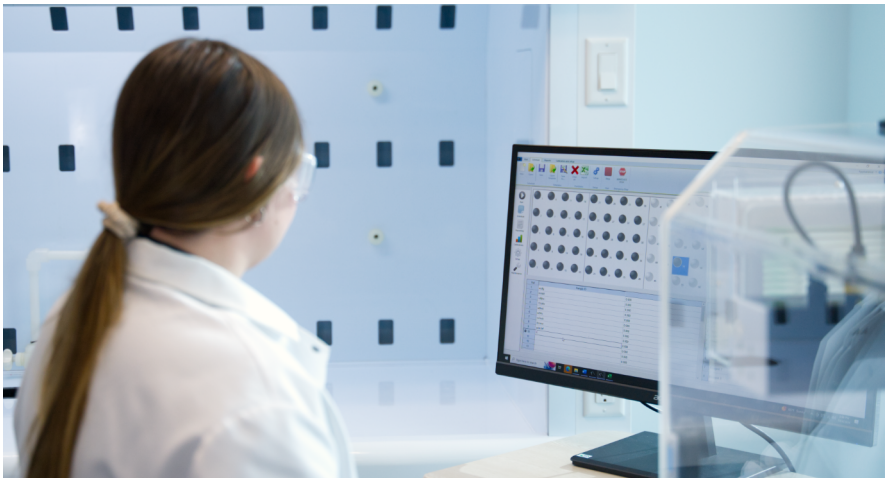
The DEENA 4 was designed for increased durability. It is encased in high-grade plastic and PTFE and has a carbon fiber dispensing arm. The DEENA's electronics are coated and surrounded by acrylic casings. Air purging creates positive pressure to eliminate acid fumes inside the unit. Air purging in the acrylic case also protects the electronics and sensors on the carbon fiber arm. These measures ensure consistent and reliabile performance and secure you return on investment. The tubing and other wetted parts are made from high-purity plastics compatible with the corrosive acids typically involved in sample digestion of trace metals. Contamination-free vials of different sizes and materials are available for various applications.

EFFICIENCY

The DEENA has a standby warming feature which allows for a new batch to rapidly be brought up to digestion temperature. Overnight digestions can be set up to automatically start at a predetermined time so samples are ready for analysis at the beginning of each day. Automating the entire digestion procedure allows lab personnel to pursue more time-valued tasks.

SOFTWARE

The intuitive software is designed for simple navigation with user-friendly icons and menus. Methods are completely customizable with straightforward commands. The software comes preloaded with several common methods, but users may also set up their own method templates. Method actions are time-stamped in reports to comply with audit requirements. Reports can be printed or exported for tracking each sample throughout the run. Real-time functions allow the user to note sample temperature and insert comments while the run is in progress.



ACCESSORIES

FUME HOOD

▶ *HIGHLY RECOMMENDED*

Free up valuable hood space with this self-contained HEPA filtered fume hood. Connecting directly to your existing duct work, this allows the DEENA to operate safely on your laboratory bench.

VIAL TYPES AVAILABLE

▶ *15 mL, 50 mL, 100 mL*

Polypropylene
Can be heated up to 135°C

PTFE
Can be heated up to 220°C

Glass
Can be heated above 300°C

SYRINGE MODULE

Accurately dispense standards and automatically spike samples with this precision syringe module. Fully integrated into the DEENA, it is controlled by the software.

TECHNICAL SPECIFICATIONS

Dimensions H x W x D
20.5" x 33" x 20.5"
52 x 84 x 52 cm

Dimensions with Fume Hood
25.4" x 33" x 20.5"
64.5 x 84 x 52 cm

Weight
≈132 lbs | 60 kg

Capacity
60 positions for 50 mL vials
36 positions for 100 mL vials
96 positions for 15 mL vials

Temperature Range
Ambient - 200°C

Communication
USB

Voltage
240 V

Power Requirements
220/240 V, 50 Hz

Power Consumption
15 Amps
(20 Amp Service Required)

Operating System
Windows 10 or above

Accuracy
> 0.025 mL or 1%

Precision
> 0.035 or 1%

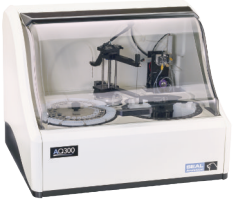
Range
> 0.5 mL

Ideal for
Metals, Mercury, TP

SEAL Analytical

Colorimetric Nutrient Analyzers

DISCRETE ANALYZERS



AQ300

AQ400

AQ700

SEGMENTED FLOW ANALYZERS

AA100

AA500

QuAAtro39

50 Years of Experience in Environmental Analysis Built into Every Analyzer

50 years' experience in designing, developing and manufacturing automated wet chemistry analyzers specifically for very low detection levels in environmental applications has helped SEAL to apply the most useful, easy to use features into the SEAL range of Discrete and Segmented Flow analyzers. The SEAL analyzers are widely acknowledged as the best for environmental analysis, giving you everything you need to achieve equal or superior results to the manual and approved laboratory methods the SEAL analyzer replaces.

Digestion Systems

FOR METALS AND TKN, TP DIGESTION

BD50

DEENA 4

SEAL Analyzers are monitoring environmental samples in every corner of the globe. They are manufactured in the USA, Germany and the Netherlands. Engineering and chemistry support is provided from SEAL global facilities in USA, Germany, UK the Netherlands, and China along with our worldwide network of specialist distributors.

COMPREHENSIVE SUPPORT

We offer comprehensive applications, technical service and software support.

INCLUDING

- A choice of preventative maintenance and service contracts to meet your specific requirements
- In-house and online training
- Guaranteed availability of genuine consumables and spare parts
- Adaptation of methods to specific requirements such as matrix, range or detection limit
- Continuous in-house development of software to incorporate new customer requested features

Robotic Handling Systems

Discover SEAL's Robotic MiniLab systems for automating sample pretreatment and testing in the laboratory, improving your sample handling efficiency.

Typical applications include BOD, pH, COD, alkalinity, and conductivity measurements with options such as decapping/capping, sample splitting and filtration. Call us about your laboratory needs and we will configure a robot to suit you.

SEAL MiniLab

SEAL Analytical

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