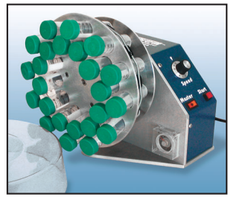
Model 300 Cyclonic Oscillator

Provides a means to obtain more accurate and reproducible analysis results. **This is accomplished by placing the sample containers through two mechanical actions simultaneously.** The samples contained in the sample tray/drum are under a continuous gravitational change by rotation of 360 degrees and 20 degrees end to end angular change per revolution. This motion processes the contained samples forming a homogeneous flow allowing no stratification due to sample density configuration differences.



The Cyclonic Oscillator consists of a sample tray/drum which is mounted on a drive unit; for convenience more than one drum can be provided. The D24A drum handles 24 tubes of 30 to 50 ml volume. Custom drums for other size sample tubes can be requested.

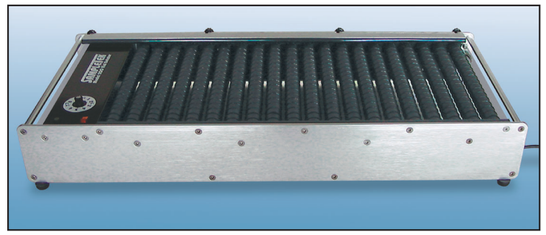
There is great versatility in the Cyclonic Oscillator's speed/cycle time from 0 to 42 cycles/revolutions per minute with a timer that has multiple range selections from seconds to hours. After making selection, just press "start" button. Following runs will be identical unless cycle/speed or running time is changed.

The Cyclonic Oscillator is ideal for processing viscous substances and liquid-solid substances as well as performing determinations on solubility or non-solubility samples. Additional uses include performing digestions or extractions where minimum aeration may be desired.

Cyclonic Oscillator Technical Specifications

Number of tubes	24
Tube size	30 to 50 ml
Rotation speed	0 to 42 rpm
Dimension (WxDxH)	12"x10¼"x12"
Net weight	16 lb.
Electrical supply	115VAC 60Hz

Model 200 Vial Rotator



Provides a safe, efficient means of pulverizing soil and particulate matter into a fine talc-like powder in preparation for analyses, such as total carbon, nitrogen or sulfur. Typically, air-dry soil or crushed organic materials are reduced to less than 100-mesh overnight.

Scintillation vials are commonly used for the processing in that they provide a sufficient sample size for most analyses, up to 95 vials per run. The vial rotator can also rotate French square bottles as well as larger sample containers by removing rollers to change spacing. One hex tumbling bar is used per sample to assist pulverization. Hex tumbling bar can be removed after pulverization by use of a magnet.

100 scintillation vials and 100 carbon steel hex tumbling bars are included. Stainless hex tumbling bars are available.

Vial Rotator Technical Specifications

Number of removable rollers	20 - 1¼" diameter
Roller speed is from	0 to 80 rpm
Dimension (WxDxH)	37" x 17" x 5½"
Net weight	42 lb.
Electrical supply	115VAC 60Hz

SAMPLETEK™

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SAMPLETEK™

Innovator of Sample Preparation Equipment

Repeatable Results

The Model 24VE Programmable Vacuum Extractor provides a means to pass a precise amount of extractant through multiple samples in a precise amount of time. This is accomplished by drawing the extractant into the receiving syringes by mechanical means controlled by a programmable micro-processor.

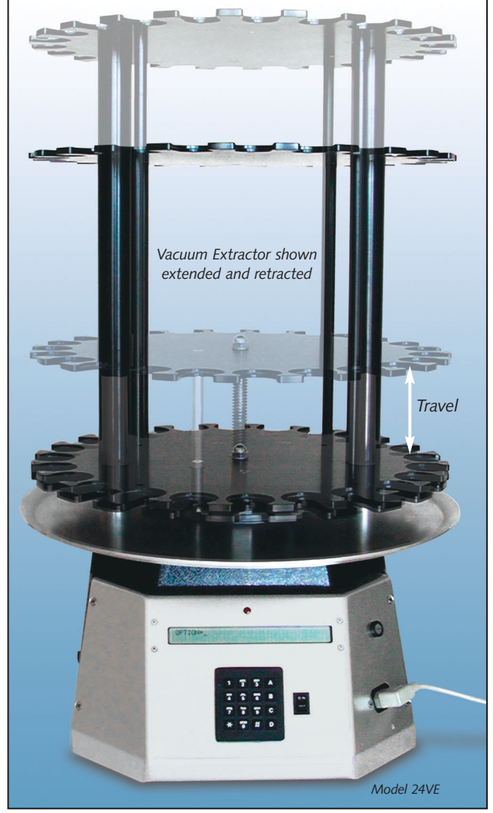
Homogeneous Sample Evaluation

Model 300 Cyclonic Oscillator provides a means to maintain a sample in a homogeneous state for evaluating solubility/non-solubility; facilitating digestion/extraction or for low foaming agitation.

Fine Grind Efficiency

Model 200 Vial Rotator provides a means to process multiple samples into a fine talc-like powder overnight.

Model 24VE Programmable Vacuum Extractor



Model 24VE

SampleTek Programmable Vacuum Extractor Model 24VE is a mechanically driven vacuum extraction system which is micro-processor controlled. This technique of extraction by leaching provides a means to obtain **repeatable verifiable results** as for Extractable Acidity and Cation Exchange Capacity (CEC). Extractants such as 1N NH_4OAc, 1N KCL, and Acid Oxalate can be used to extract ions for analyses by various instrumentation techniques. Water extractable ions can be extracted from saturated pastes using the 9cm paste extraction cup accessory.

Extractions are accomplished by passing a selected amount of extractant through samples in a precise amount of time regardless of the density or porosity of the sample.

This occurs as the upper two discs of the extractor move upward resulting in volume change in the extraction syringe retained by the fixed lower disc. The Model 24VE handles up to 24 samples at a time and can be set to complete the extractions in a time period ranging from 5 minutes to 24 hours with extractant volumes of 10 to 60 milliliters.

Vacuum Extractor control panel is equipped with an on/off switch, 16 key set-up pad and a red "in operation" indicator.

All operations are set up by use of a sixteen button keypad located on the front panel. An eighty character display is used by the operator for reliable set-ups.

The Model 24VE is equipped with a removable electrical cord allowing the unit to be rotated for easy loading.

The 24 sample positions are numbered for reference purposes

Technical Specifications

Sample tube positions	24
Extraction cup positions	12
Extraction volumes	10 to 60 milliliters
Cycle time from	5 minutes to 24 hours
Micro-processor controlled	
Rotatable base	
Dimension (W x D x H)	17¾" x 17¾" x 23¼"
Net weight	46 lb.
Electrical supply either	115VAC 60Hz or 220VAC 50Hz

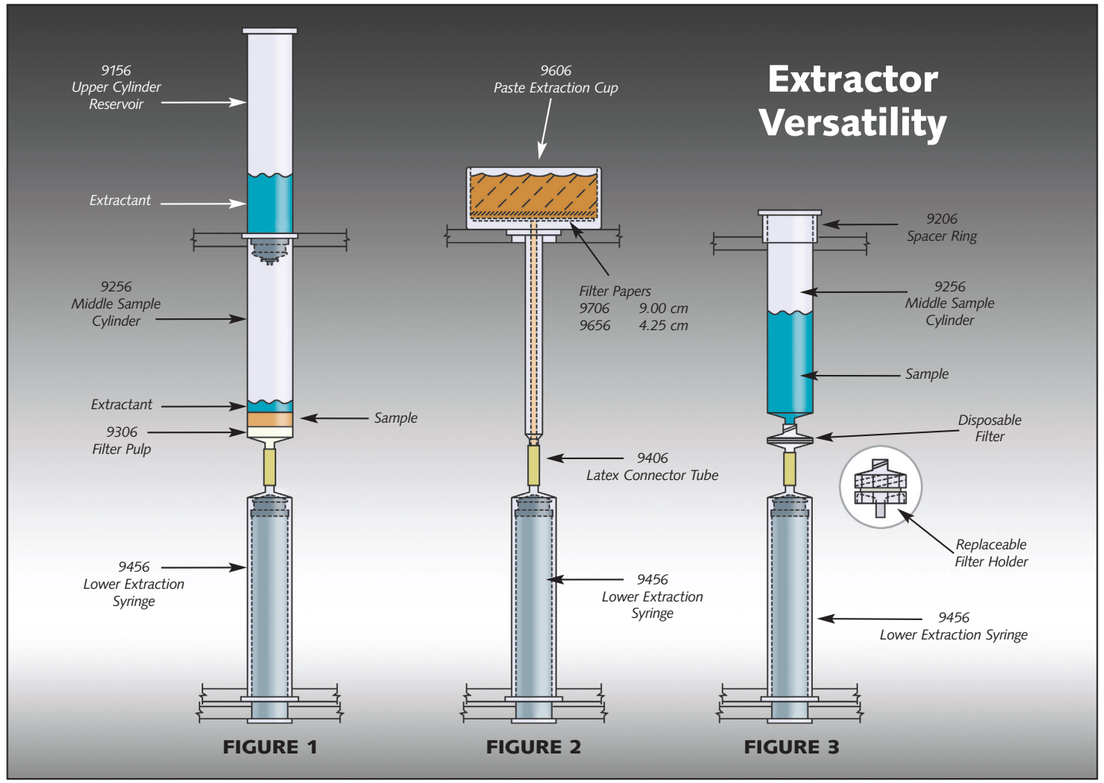
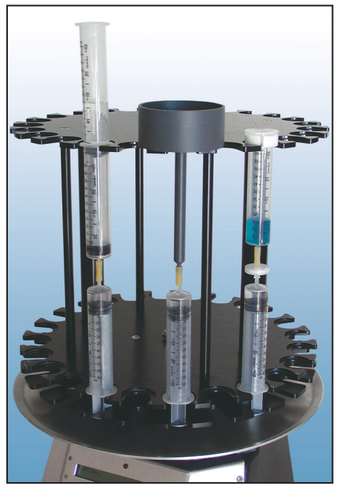


FIGURE 1

Shows the proper configuration used when extracting samples for procedures such as Cation Exchange Capacity (CEC) determinations. The middle cylinder (#9256) containing the sample can be equipped with an auxiliary reservoir for the extractant by using an upper cylinder reservoir with stopper (#9156). This may be advantageous for some procedures in that it supplies continuous fresh extractant dripping through to the sample below in the sample cylinder. This is accomplished due to the sealed configuration between the cylinders thus allowing the extractant to drip onto the sample at the same rate that it passes through the sample. Vacuum is created in the lower extraction syringe (#9456) as it is withdrawn by the extraction apparatus.



As illustrated above in figures 1,2 and 3

FIGURE 2

Shows the proper configuration using the paste extraction cup (#9606). This configuration provides a means for paste extraction or filtration. Two filters papers are used: 4.25 cm (#9656) over the center hole and a 9 cm filter (#9706) over that.

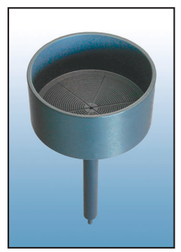


FIGURE 3

Shows the proper configuration using a disposable syringe filter or syringe filter holder for replaceable filters. In this configuration a syringe spacer ring (#9206) is used to retain the sample cylinder in position. By varying filtration porosity and apparatus withdrawal rate a variety of sample types can be processed, whether in or out of solution or of high or low viscosity.