

DSP  **systems**
The missing link in your laboratory!



SER 158 **Automatic Solvent Extractor**

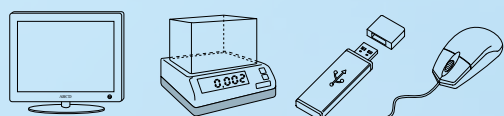
Safe Solid-Liquid Extraction for a Variety of Applications

SER 158 Solvent AutoExtractor

Solvent extraction with the SER 158 can be performed for extractable matter determination on a wide range of sample matrices either in food and nonfood industries (such as pulp, paper, textile, chemical etc...) and for sample preparation for environmental analysis. The solid-liquid extraction process removes the soluble components from solids using a liquid solvent. The SER 158 is able to perform fully automated Randall extractions in complete safety, calculating and archiving the results in the easy-to-use ControlPad. It works in accordance to the following standards: AOAC, ISO, EPA, APHA, UNI etc...

SER 158 Solvent AutoExtractor

Can be connected to



VELP Scientifica takes another step ahead in raising solvent extraction process to excellence. SER 158 is a fully automated solvent extractor capable of a high sample throughput, offering state-of-the-art technology for a fast, precise and accurate fat determination in complete safety according to the Randall technique.



SolventXpress™

A unique, smart and hermetically sealed solvent dispensing system assuring no exposure to the solvent for maximum operator safety.



Minimized Solvent Consumption

Patent pending titanium condensers for unparalleled performance. More than 90% of the solvent used is recovered and stored in the internal recovery tank.

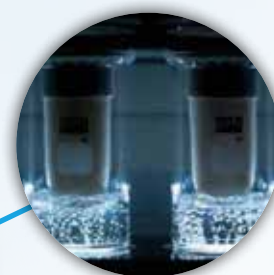


Find out more:
watch our video



LED Guidance

The extraction process is easily visualized thanks to the LEDs illuminating the active positions.



Extractable ControlPad

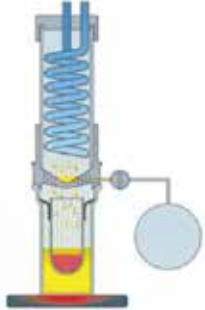
The ControlPad is able to control up to 4 units independently, and features the immediate display of calculated results on the onboard storage. Integrated yet removable, it can be connected with a balance for a completely new experience.

SafeEnd™

The fully automated cooling operation prevents the overheating of the soluble matter.

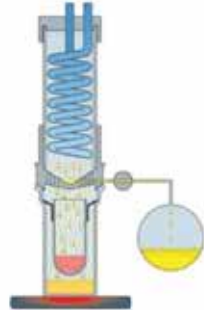
Fully Automatic Extraction Process

The analysis consists of up to 5 steps to ensure a complete sample extraction:



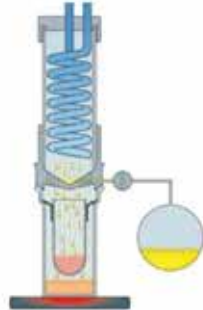
1 - IMMERSION

The sample is immersed in boiling solvent for an effective defatting action.



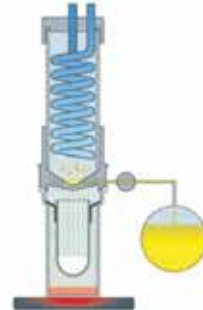
2 - REMOVING

The level of solvent is automatically lowered below the extraction thimble. Part of the solvent is collected in the recovery tank, the rest continues to flow through the sample.



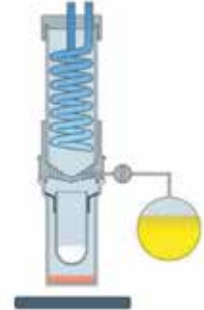
3 - WASHING

The condensed solvent flows over the sample and through the thimble to complete the extraction process.



4 - RECOVERY

More than 90% of the solvent is recovered in the internal recovery tank.



5 - COOLING

The heaters are switched off and the glass cups containing the extracts are automatically lifted to prevent extracted

Key benefits: proven performance, reliable results

- **Unattended operations, "Load & Go"**: simply prepare the sample and start the analysis with "one-click"; automatic shutdown feature improves overall throughput for unattended operations 24/7.
- **Extremely versatile and scalable**: the SER 158 is preconfigured to address a variety of applications and includes complete set of accessories; investment is protected by seamlessly allowing the increase of connected units according to throughput requirements; supports Twisselman technique.
- **Accurate & precise**: proven performance and reliable results combined with excellent reproducibility. The SER 158 improves the extraction process compared to the traditional Soxhlet (five times faster). Results are precise and in compliance with major standards.
- **Safe and smart**: the automatic solvent dispensing system minimizes the exposure to the solvent ensuring the operator safety. A wide range of accessories guarantee safe sample handling for a large variety of solvent extraction applications.
- **Fast and easy**: the automatic extraction process completes fully unattended 5-step analysis according to the Randall technique in a short time. Easy user interface including full multi-lingual support.
- **Low operating cost**: state-of-the-art technology incorporated into the SER 158 relieves the user of manual operations as well as limiting consumption for a higher productivity.

Fields of Application

The SER 158 Series is ideal for the determination of crude and total fat content and for sample preparation aimed at the extraction of pollutants and contaminants according to the Randall technique.



Food and feed industry



Environmental industry



Pharmaceutical
and Chemical industry

Technical specifications

	SER 158/3	SER 158/6
Positions:	3-positions	6-positions
Max. Capacity:	21 samples/day/unit	42 samples/day/unit
Scalability:	12-pos. (up to 4 units)	24-pos. (up to 4 units)
Display:	7" color touch screen - extractable ControlPad	
Solvents Accepted:	Capable of being used with the majority of solvents	
Solvent Recovery:	> 90%	
Automation:	Immersion, Removing, Washing, Recovery, Cooling	
Lighting:	LED show 3/6 active positions	
Heating Element:	Glass ceramic - 3/6 positions independent switch on/off	
Sample Size:	0.5 to 15 g in 33x80 mm thimbles (generally 2-3 g)	
Seals:	Viton, Butyl, and Vaflon	
Condensers:	Titanium (VELP Patent Pending)	
Interfaces:	3 x USB (balance, mouse, USB stick), Ethernet (Pc)	
Result Calculation:	Automatic, archived on the ControlPad	
Water Consumption:	From 1.0 l/min	
Dimensions (WxHxD):	358x546x450 mm - 14x21,5x17,7 inch	546x546x450 mm - 21,5x21,5x17,7 inch
Dimensions with ControlPad:	358x546x570 mm - 14x21,5x22,4 inch	546x546x570 mm - 21,5x21,5x22,4 inch
Weight (SER 158/ControlPad):	Kg 29 / 1 - 64 / 2,2 lb.	Kg 36 / 1 - 80,3 / 2,2 lb.
Power Supply:	115/230- 50/60 V-Hz	115/230- 50/60 V-Hz
Power Consumption:	630/850 W	630/850 W

INSTRUMENT

INSTRUMENT	POWER SUPPLY	CODE No
SER 158/3	115/230 V - 50/60 Hz	S303A0390
SER 158/6	115/230 V - 50/60 Hz	S303A0380
SER 158/3 no ControlPad	115/230 V - 50/60 Hz	F303A0390
SER 158/6 no ControlPad	115/230 V - 50/60 Hz	F303A0380

SUPPLIED WITH

				
*A00000286 ControlPad	A00000298 Grey butyl seal SER158 3pcs/box	A00000297 Green viton seal SER158 3pcs/box	A00000290 Extraction cup Ø 56x120mm 3pcs/box	A00000312 Extraction thimbles holder Ø 33mm
<small>* Included only in codes S303A0390 and S303A0380</small>				
				
A00000305 Boiling stones, 80 g	A00000295 Cellulose thimbles 33x80mm, 25pcs/box	10000280 Inlet water tube	10002866 Teflon tube Ø 4x6mm	10006054 Connection 1/8 NPT - tube 6x4

OPTIONAL ACCESSORIES	CODE No
White vaflon seal SER158 3pcs/box	A00000288
Extraction cup Ø 48x120mm 3pcs/box	A00000303
Extraction cup Ø 65x120mm 3pcs/box	A00000302
Extraction thimbles holder Ø 25mm	A00000291
Extraction thimbles holder Ø 40mm	A00000292
Cellulose thimbles 25x80mm, 25pcs/box	A00000294
Cellulose thimbles 40x80mm, 25pcs/box	A00000296
Glass fiber thimbles 25x80mm, 25pcs/box	A00000314
Glass fiber thimbles 33x80mm, 25pcs/box	A00000313
Thimble weighing cup	A00000310
Thimbles stand 6 places	A00000311
Handling device extraction cups SER158/6	A00000304
Crucible holder HU 6 for SER158	A00000293
Complete Glass bottle solvent collection	A00000301
Inlet Connection 1/4NPT-tube Ø 4,3÷4,5mm	A00000299
Inlet Connection 1/4NPT-tube Ø 4,8÷5mm	A00000300
Slave connection cable	A00000287
Adapter USB-RS232	A00000195
PC Connection cable	A00000289
Extension lead 2m for ControlPad	A00000315
IQ/OQ SER158	A00000306

The **SER 158** can be supplied with or without ControlPad. All configurations already include a set of accessories that can be used for the most common industries and applications. Optional accessories are available on request.