



| Estrattore Soxhlet SER 148

# FAT EXTRACTION

## SER 148 SOLVENT EXTRACTOR

### FAT EXTRACTION USING SOLVENTS

Solvent extraction is used to determine the quantity of various components contained in agricultural, industrial or environmental samples. Soxhlet extraction is one of the most widely used analytical techniques. Adaptations of the technique have been introduced over time in order to reduce lengthy extraction times, for example by increasing the temperature of the solvent used. The modifications introduced by the American chemist Edward L. Randall are some of the most effective for this purpose. VELP Scientifica solvent extractors operate according to the **Randall technique**.

The **SER 148/3** and **SER 148/6** can be used to separate a substance or a group of elements (e.g. fat) from solid and semi-solid samples according to the **Randall technique** (consisting of immersion, washing and solvent recovery). This technique has three great benefits over the traditional Soxhlet technique:

- **up to 5 times faster than Soxhlet** (hot solvent vs. cold solvent)
- **low solvent consumption** (solvent recovery)
- **limited cost per analysis**

In addition, the SER 148 offers **full operator safety** in compliance with IP55. The main field of application is the determination of the content of soluble products such as fats, detergents, plasticizers and pesticides in food, animal feeds, detergents, rubber and plastic formulas, pharmaceutical products, soil, etc.

**GLP** Good Laboratory Practice  
**AOAC • TAPPI • UNI • EPA**  
**ASTM • APHA • AWWA • WEF**

SER 148/6



SER 148/3



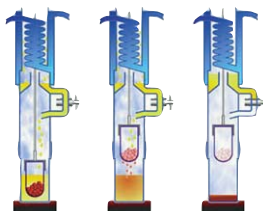
#### SOXHLET TECHNIQUE

The solubilization of extractable components is performed by a cold solvent dropping from a reflux condenser. Consequently a complete extraction lasts many hours.



#### RANDALL TECHNIQUE

The first phase of extraction is performed by immersing a sample - containing thimble in boiling solvent followed by a washing with cold refluxing solvent. The fast solubilization achieved by the hot solvent results in a sharp reduction of extraction time.



#### SUPPLIED WITH

#### CODE No

SER 148/3 Extraction cup, 3 pcs/box	A00001141
SER 148/3 Heat shield	40000210
SER 148/6 Extraction cup, 6 pcs/box	A00000142
SER 148/6 Heat shield	40000220
Extraction thimbles 33x80 mm, 25 pcs/box	CM0111148
Extraction thimbles holder	A00001142
Inlet tube	10000280
Viton seal	10000008
Butyl seal	10000009

#### OPTIONAL ACCESSORIES

#### CODE No

Printer	A00001009
Serial cable	A00000011
Thimbles weighing cup	A00001146
Thimbles stand	A00001149 *
Handling device for extraction cups	A00001145 *
Pincer for weighing cups	A00001147 *
Extraction cup, 6 pcs/box	A00000142
Vafon seal	A00000061
IQ/OQ/PQ Manual for SER 148	A00000073

\* only for SER 148/6

#### CONSUMABLES

#### CODE No

Extraction thimbles 33x80 mm, 25 pcs/box **CM0111148**



