Extraction Solutions
Fastest extraction with flexible applications
BUCHI offers dedicated extraction solutions for fat determination, as well as for residue and contaminant analysis in various matrices. We cover the entire range of automated extraction methods. Our solutions allow for perfect workflow integration, thus minimizing manual steps.

**Fast and Flexible**
Fulfill any extraction demand in the blink of an eye

**Powerful and fast extraction**
High-tech components and synchronized processes

**Safety maximized for you and your analytes**
Meet the highest safety standards

**Maximized flexibility**
Choose from various extraction methods to suit your requirements

The use of a fully automated extraction system ensures unattended operation which saves labor time and costs. The combination of high-speed heating elements, specially designed glassware, and an optimized process control system allows for a fast, reproducible extraction procedure that is fully compliant. Full visibility of the processes including pre-set methods, a comprehensive solvent library, and intuitive navigation all facilitate your every-day work.

Our specially designed sealing system in combination with our high performance condensers ensure minimal solvent exposure and high solvent recovery rates (> 90 %), resulting in safe and environmentally friendly extractions. Permanent monitoring of heaters, cooling water and solvent levels enables perfect user protection and smooth processes. The patent pending analyte protection sensor prevents the deterioration of heat sensitive analytes.

Adapt your FatExtractor E-500 to changing requirements with the interchangeable glass assembly SOX-HE-ECE and execute extractions according to Soxhlet, Randall or Twisselmann. The UniversalExtractor E-800, with the all in one universal extraction chamber has the ability to run up to five different extraction methods simultaneously on each of its six sample positions. This increases sample throughput and allows rapid method optimization.
Effortlessly master your everyday tasks

Extraction Solutions

Dedicated extraction solutions for the determination of fat, for residue and contaminant analysis in various matrices, as well as for any other solvent extraction of materials for R&D or quality control.

**Food and Feed**

**Total fat determination**

- Application:
  - Labeling and quality control
  - Reference method for NIR calibrations
  - Acid hydrolysis as a mandatory step prior to extraction to obtain the total fat content

- Needs:
  - Accurate and reproducible results
  - High sample through-put with minimal user intervention
  - Fully compliant with standard methods

- Solution:
  - FatExtractor E-500

**Food and Feed**

**Crude fat determination**

- Application:
  - Quality control
  - Hydrolysis is not required by regulations
  - Hydrolysis is not applied due to the sample’s characteristics

- Needs:
  - Low cost per sample as the amount of consumables and solvent are optimized
  - Synchronized processing of six samples in parallel leads to unprecedented sample throughput
  - Easy-to-use instrument with intuitive navigation

- Solution:
  - HydrolEx H-506
- Extraction as part of sample preparation prior to analysis of contaminants and residues in environmental or food samples
- Material design
- Research of active compounds in medicinal plants
- Characterization of polymers
- Quality control of materials and chemicals

- High analyte recoveries and low standard deviations thanks to exhaustive extractions
- Determination of low contamination levels
- Prevention of analyte deterioration from heat or oxygen
- Maximized flexibility for solvent and method selection
- Adapt to the changing requirements of your extraction tasks
- Running different extraction methods in parallel for fast method development
- Tailor-made performance for maximized sample throughput
- Easy operation with intuitive navigation
- Fully compliant with standard methods

UniversalExtractor E-800
**True Soxhlet**
- Soxhlet extraction is both exhaustive and robust. It is also the method most widely used to meet regulations for many sample matrices.
- Analytical risks or time-consuming validation of other extraction methods deviating from the standard do not exist.
- Used as a reference method for NIR calibrations.

**Soxhlet extraction made faster**
- Use of high-end components, such as the optical sensor, the powerful heating element, and optimized glass assembly, further reduce cycle times.
- An automated Soxhlet process produces results much faster than traditional glassware assemblies.
- Faster results and an unprecedented sample throughput per day.

**Interchange between glass assemblies (SOX-HE-ECE)**
- Easily change glass assemblies to comply with Soxhlet, Randall (HE) and Twisselmann (ECE).
- Not limited to one extraction method, but adaptable to your needs or changing demands.
- Profit from unrivalled extraction times and the lowest solvent consumption with HE.
**Interchangeable glass assembly**
By simply changing the glass assembly, the FatExtractor E-500 complies with standard methods such as Soxhlet, Hot Extraction (HE) or Twisselmann (ECE).

**Re-use your solvent**
The freshly distilled solvent is collected in an easily accessible and detachable bottle. Execute an environmentally friendly extraction process and save money. The innovative flange z-seal system guarantees minimal solvent emission.

**Individual level sensors**
Achieve the highest turnaround of Soxhlet cycles by adjusting the level detection sensor to the sample volume. This significantly increases the extraction efficiency and your sample throughput per day.

**Adapt to sample size**
The main glass parts are expanded up to 60%, as is required for the direct extraction of low fat samples.
## FatExtractor E-500 Technical Data

### Specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension (W × D × H)</td>
<td>638 × 595 × 613 mm</td>
</tr>
<tr>
<td>Net weight</td>
<td>42 kg</td>
</tr>
<tr>
<td>Power consumption</td>
<td>1300 W</td>
</tr>
<tr>
<td>Connection voltage</td>
<td>100 – 240 V (±10 % VAC)</td>
</tr>
<tr>
<td>Frequency</td>
<td>50 / 60 Hz</td>
</tr>
<tr>
<td>Solvent recovery</td>
<td>&gt; 90 %</td>
</tr>
<tr>
<td>Water consumption</td>
<td>max. 1.7 L / min</td>
</tr>
</tbody>
</table>

### Application specific configurations

<table>
<thead>
<tr>
<th>Method and synonyms</th>
<th>Soxhlet extraction</th>
<th>Hot extraction = Randall = Submersion</th>
<th>Economic Continuous Extraction = Twisselmann</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method characteristics</td>
<td>High analytical safety and a very gentle process at low sample temperature</td>
<td>Corresponds to the extraction method of third party suppliers</td>
<td>Convenience is important</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reproducibility (RSD)</th>
<th>+++</th>
<th>+</th>
<th>++</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance</td>
<td>+++</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Costs</td>
<td>+</td>
<td>+++</td>
<td>++</td>
</tr>
<tr>
<td>Glass assembly LSV* for higher sample quantities</td>
<td>Option</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Analyte protection sensor detects the presence of beaker and solvent including solvent level</td>
<td>Option</td>
<td>Option</td>
<td>Option</td>
</tr>
<tr>
<td>Pro color display, 7” with touch screen</td>
<td>Option</td>
<td>Option</td>
<td>Option</td>
</tr>
</tbody>
</table>

* Large Sample Volume
Complementary and Robust
Acid hydrolysis – a safe and smooth process

Compliant acid hydrolysis for total fat determination
- Acid hydrolysis prior to extraction is an essential work step of the total fat determination whereby matrix structures enclosing the fat fraction of food and feed samples are broken up
- Assures conformity with official regulations for the declaration of total fat content
- The standardized and exhaustive procedure guarantees reproducible results
- Supports large sample volumes of up to 10 gram samples for accurate results, independent of fat content or homogeneity

Safe handling
- Effective and long-lasting FKM sealings avoid exposure to harmful fumes
- Convenient transfer of the hydrolyzate without getting in contact with the sample

Easy-to-use
- The lift device supports smooth movement of the sample rack
- Efficient rinsing with dedicated rinsing caps
- Fast and convenient filtration for complete sample transfer and high recoveries
- Convenient transfer of the hydrolyzate into the Soxhlet extraction chamber with reusable glass sample tubes
**Integrated workflow**
The perfect match between hydrolysis and fat extraction. The specialized glass samples tube fits perfectly into the FatExtractor E-500.

**Rinsing funnels**
The innovative rinsing funnels facilitate the rinsing of hydrolysis vessels, and guarantee the quantitative transfer from the vessels into the glass sample tubes for easy handling and reproducible results.

**Made for large sample volumes**
The hydrolysis vessels can handle large sample volumes, both liquids and solids, of up to 10 g. A large sample volume ensures reproducible results for low-fat or particularly inhomogeneous samples.

**Smooth filtration**
Smooth filtration and rinsing of six samples in parallel is made possible thanks to a powerful vacuum source, optimized glass parts, as well as individual stop cocks that can interrupt the vacuum at each position.

**Specialized hydrolysis vessels**
Unique hydrolysis vessels reduce foaming even with large sample volumes.
**HydrolEx H-506**
**Technical Data**

**Specification**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension (W x D x H)</td>
<td>312 x 614 x 470 mm</td>
</tr>
<tr>
<td>Net weight</td>
<td>13 kg</td>
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<tr>
<td>Power consumption</td>
<td>1200 W</td>
</tr>
<tr>
<td>Connection voltage</td>
<td>220 – 240 V or 110 – 120 V (+/- 10 % VAC)</td>
</tr>
<tr>
<td>Frequency</td>
<td>50 / 60 Hz</td>
</tr>
</tbody>
</table>

**Process of acid hydrolysis**

1. Sample preparation

2. Hydrolysis

3. Filtration and rinsing

4. Drying and transfer to FatExtractor E-500
UniversalExtractor E-800

Powerful and Perfect for Multitasking
High performance with widest application range

**Multitasking**
- Six distinct extraction positions enable individual process control and simultaneous operation of different extraction methods
- Different extraction tasks can be carried out in parallel
- Faster method development and higher sample throughput

**Analyte protection sensor**
- Patent pending analyte protection ensures that a minimum level of solvent remains in the beaker, resulting in an enhanced analyte recovery
- Prevents the deterioration and degradation of heat sensitive analytes during all process steps
- Ensures that the concentration step in the extraction procedure is safe and reproducible.

**Fully inert conditions and maximized safety for the analyte**
- All components in the UniversalExtractor E-800 that are in contact with the sample and the solvents are made of inert material
- Eliminates sample contamination and any memory effects from leaching materials
- The inert gas supply is selectable through-out all stages of the process
- Inert gas is automatically switched on if the analyte protection sensor is triggered

**Flexible applications**
- Profit from five different extraction methods in one universal glass assembly. Choose the optimal extraction method to achieve the highest analyte recovery with the lowest variation of results
- For low analyte concentration, the Large Sample Volume (LSV) glass assembly can increase the sample volume by 60 %
- Fast and equal heating, even for high boiling solvents such as water or toluene
**Optimal sample size**
The LSV glass assembly with the larger extraction chamber and beaker allows for the higher sample quantities needed to achieve the required detection limit of the analyte. The main glass parts are enlarged by 60%.

**Full visibility**
The entire extraction process is visible. The glass assemblies can easily be accessed and disassembled for cleaning and for decontamination in the oven (+450 °C).

**High performance condensers**
The large condenser captures vapors efficiently and ensures the highest solvent recovery (> 90 %), even with volatile solvents. Vapor emissions are eliminated allowing for operation outside of the fume hood.

**Analyte protection sensor**
Monitors the solvent level in the beaker and prevents the beakers from running dry. For a safer process and the best protection of heat-sensitive analytes.
### UniversalExtractor E-800

#### Technical Data

<table>
<thead>
<tr>
<th>Specification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension (W x D x H)</td>
<td>638 × 595 × 613 mm</td>
</tr>
<tr>
<td>Net weight</td>
<td>45 kg</td>
</tr>
<tr>
<td>Power consumption</td>
<td>1780 W</td>
</tr>
<tr>
<td>Connection voltage</td>
<td>200 – 240 V (+/- 10 %)</td>
</tr>
<tr>
<td>Frequency</td>
<td>50 / 60 Hz</td>
</tr>
<tr>
<td>Solvent recovery</td>
<td>&gt; 90 %</td>
</tr>
<tr>
<td>Water consumption</td>
<td>max. 1.7 L / min</td>
</tr>
</tbody>
</table>

#### Application

<table>
<thead>
<tr>
<th>Specific configurations</th>
<th>UniversalExtractor E-800 ECE</th>
<th>UniversalExtractor E-800 Standard / LSV</th>
<th>UniversalExtractor E-800 Pro / LSV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soxhlet</td>
<td>–</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Soxhlet warm</td>
<td>–</td>
<td>–</td>
<td>●</td>
</tr>
<tr>
<td>Hot extraction</td>
<td>–</td>
<td>–</td>
<td>●</td>
</tr>
<tr>
<td>Continuous flow</td>
<td>–</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Twisselmann</td>
<td>●</td>
<td>–</td>
<td>●</td>
</tr>
<tr>
<td>Universal glass assembly incl. level sensor and valve</td>
<td>–</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>ECE glass assembly</td>
<td>●</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Analyte protection sensor</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Pro color display, 7” with touch screen</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Chamber heater</td>
<td>●</td>
<td>–</td>
<td>●</td>
</tr>
<tr>
<td>Universal glass chamber, LSV</td>
<td>–</td>
<td>Option</td>
<td>Option</td>
</tr>
<tr>
<td>Inert gas supply</td>
<td>–</td>
<td>–</td>
<td>Option</td>
</tr>
</tbody>
</table>
## Product overview

The best solution for your needs

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Hydrolysis</th>
<th>Fat extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fat and lipids</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Food contaminants and residues</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>POP, TPH, PPCP, VOC and explosives</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Polymer constituents or contaminants</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Active compounds in medicinal plants</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

## Characteristics

<table>
<thead>
<tr>
<th>Method</th>
<th>Acid hydrolysis</th>
<th>Classical Soxhlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical process time [min]</td>
<td>~ 35</td>
<td>~ 90</td>
</tr>
<tr>
<td>Max. working solvent volume [mL]</td>
<td>100</td>
<td>175</td>
</tr>
<tr>
<td>Sample holder volume [mL]</td>
<td>65</td>
<td>65 / 120 (glass sample tube)</td>
</tr>
<tr>
<td>Thimble size: inner diameter by length [ID × L, mm]</td>
<td></td>
<td>25 × 100; 33 × 94 / 33 × 94; 43 × 118</td>
</tr>
<tr>
<td>Typical solvent use per sample [mL]</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Solvents</td>
<td>HCl solution</td>
<td>Chloroform, hexane, petroleum-/diethyl ether</td>
</tr>
<tr>
<td>Temperature range [°C], boiling points</td>
<td>&lt; 110</td>
<td>&lt; 70</td>
</tr>
<tr>
<td>Materials in contact with sample</td>
<td>Borosilicate glass 3.3 FKM</td>
<td>Borosilicate glass 3.3, FKM, FFKM</td>
</tr>
</tbody>
</table>
## Fat extraction

<table>
<thead>
<tr>
<th>FatExtractor E-500 HE</th>
<th>FatExtractor E-500 ECE</th>
<th>UniversalExtractor E-800 ECE</th>
<th>UniversalExtractor E-800 Standard / LSV</th>
<th>UniversalExtractor E-800 Pro / LSV</th>
</tr>
</thead>
<tbody>
<tr>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>~ 40</td>
<td>~ 60</td>
<td>&gt; 120</td>
<td>&gt; 120</td>
<td>&gt; 120</td>
</tr>
<tr>
<td>100</td>
<td>175</td>
<td>175</td>
<td>175 / 320</td>
<td>175 / 320</td>
</tr>
<tr>
<td>65 (glass sample tube)</td>
<td>65 (glass sample tube)</td>
<td>65 / 120</td>
<td>130 / 220</td>
<td>130 / 220</td>
</tr>
<tr>
<td>25 x 100; 33 x 94</td>
<td>25 x 100; 33 x 94</td>
<td>25 x 100; 33 x 94</td>
<td>25 x 150; 33 x 150 / 33 x 150; 43 x 150</td>
<td>25 x 150; 33 x 150 / 33 x 150; 43 x 150</td>
</tr>
<tr>
<td>50</td>
<td>70</td>
<td>70</td>
<td>110 / 180</td>
<td>110 / 180</td>
</tr>
<tr>
<td>Chloroform, hexane, petroleum-/diethyl ether</td>
<td>Chloroform, hexane, petroleum-/diethyl ether</td>
<td>Water, organic solvents</td>
<td>Water, organic solvents</td>
<td>Water, organic solvents</td>
</tr>
<tr>
<td>&lt; 70</td>
<td>&lt; 70</td>
<td>&lt; 150</td>
<td>&lt; 150</td>
<td>&lt; 150</td>
</tr>
<tr>
<td>Borosilicate glass 3.3, FKM</td>
<td>Borosilicate glass 3.3, FKM</td>
<td>Borosilicate glass 3.3, PTFE</td>
<td>Borosilicate glass 3.3, PTFE, FFKM</td>
<td>Borosilicate glass 3.3, PTFE, FFKM</td>
</tr>
</tbody>
</table>

## Universal extraction

- **Hot extraction**
  - Randall
  - Submersion

- **Economic**
  - Continuous Extraction
    - Twisselmann

- **Soxhlet, Continuous Flow**

- **Soxhlet, Soxhlet Warm, Hot Extraction, Continuous Flow, Twisselmann**

- **Typical process time [min]**
  - ~ 35
  - ~ 90
  - ~ 40
  - > 120

- **Max. working solvent volume [mL]**
  - 100
  - 175

- **Sample holder volume [mL]**
  - 65
  - 65 / 120

- **Thimble size: inner diameter by length [ID × L, mm]**
  - 25 × 100; 33 × 94
  - 25 × 100; 33 × 94 25 × 150; 33 × 150

- **Typical solvent use per sample [mL]**
  - 100
  - 100

- **Solvents**
  - HCl solution
  - Chloroform, hexane, petroleum-/diethyl ether
  - Water, organic solvents

- **Temperature range [°C]**
  - < 110
  - < 70

- **Materials in contact with sample**
  - Borosilicate glass 3.3, FKM
## Fully compliant solutions
### Meeting standards and regulations

### Fat Determination with FatExtractor E-500

<table>
<thead>
<tr>
<th>Application</th>
<th>SOX</th>
<th>HE</th>
<th>ECE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed</td>
<td>ISO 6492/11085 98/64/EC</td>
<td>ISO 6492/11085 98/64/EC AOAC 2003.06</td>
<td>ISO 6492/98/64/EC</td>
</tr>
<tr>
<td>Chocolate</td>
<td>AOAC 963.15</td>
<td></td>
<td>LFGB §64</td>
</tr>
<tr>
<td></td>
<td>AOAC 920.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ISO 23275-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dairy</td>
<td>ISO 3890-1</td>
<td></td>
<td>LFGB §64</td>
</tr>
<tr>
<td>Bakery, cereal, nut</td>
<td>AOAC 945.16</td>
<td>ISO 11085 AOAC 2003.05</td>
<td>LFGB §64</td>
</tr>
<tr>
<td></td>
<td>AOAC 948.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meat</td>
<td>ISO 1443</td>
<td>AOAC 991.36 ISO 1444</td>
<td>LFGB §64</td>
</tr>
</tbody>
</table>

### Total Fat Extraction with FatExtractor E-500 and HydrolEx H-506

<table>
<thead>
<tr>
<th>SOX</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed</td>
<td>Feed containing products of animal origin incl. milk, or of vegetable origin from which fats cannot be extracted without prior hydrolysis.</td>
</tr>
<tr>
<td>Dairy</td>
<td>ISO 8262-1</td>
</tr>
<tr>
<td>Cereals and cereals-based products</td>
<td>ISO 11085-B</td>
</tr>
<tr>
<td>Meat</td>
<td>ISO 1443</td>
</tr>
</tbody>
</table>

### Universal extractions with UniversalExtractor E-800

<table>
<thead>
<tr>
<th>Application</th>
<th>SOX</th>
<th>HE</th>
<th>ECE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dioxins, PCBS in feeding stuff</td>
<td>EN 16215</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAHs in ambient air</td>
<td>ISO 12884</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCBs in waste in soils</td>
<td>DIN EN 15308/16167</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semivolatiles in solids</td>
<td>EPA 3540C</td>
<td>EPA 3541</td>
<td></td>
</tr>
<tr>
<td>PBDEs in sludge and sediments</td>
<td>ISO 22032</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extractables in polymers and rubber</td>
<td>DIN EN ISO 6427 ISO 1407</td>
<td></td>
<td>DIN EN ISO 6427 ISO 1407</td>
</tr>
</tbody>
</table>
**Improved remote control possibilities**

**Easy monitoring and reporting**

The Extraction Reports App provides push messages, real-time status of the extraction progress and comprehensive reporting.

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**Remote monitoring**

Push notifications and real-time status delivered on your mobile device help to minimize operators presence in front of the instrument. Immediate intervention reduces down-time and maximizes the productivity of the instrument.

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**Full traceability**

The app reports the extraction parameters and process steps for complete documentation. Furthermore, it implements the calculation of gravimetric results based on the sample weight and data.

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**Configurator**

Put together your extraction system with the BUCHI configurator according to your specific needs. Simply choose from the various options available and receive your order code including a picture of your specific configuration.

More information about our configurator can be found at:

[www.buchi.com/configurator](http://www.buchi.com/configurator)
**Accessories**

**Conversion kits**
Enables the exchange of extraction methods by simply switching the glass assemblies (SOX, HE, ECE).

**Holder and support**
Beneficial holder and support for weighing purposes facilitates the easy handling of the beakers and vessels.

**Recirculating chillers F-305 / F-308 / F-314**
For efficient, economic and ecological cooling. Enables sustainable operation due to zero water consumption.

**Vacuum pump set**
Ensures an efficient and constant vacuum for acid hydrolysis (filtration step). Replaces the water jet pump for sustainable operation due to no water consumption.
Consumables

Sand
Use high quality sand for the best results. The sand is annealed and has the correct particle size for use in hydrolysis and extraction.

Celite®
Diatomaceous earth binds the fat during hydrolysis and its quality has an impact on results. BUCHI evaluated Celite 545 and recommends using this type for the highest fat recovery.

Extraction thimbles
The BUCHI extraction thimbles offer the best quality and optimized dimensions for the sample extraction. Choose a suitable thimble size depending on your sample quantity and glass assembly.

Consumable costs per sample

<table>
<thead>
<tr>
<th>Consumable costs [CHF]</th>
<th>Total fat determination¹</th>
<th>Fat extraction²</th>
<th>Extraction³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand (40 g), Celite® (4 g)</td>
<td>2.10</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Thimble⁴</td>
<td>–</td>
<td>5.30</td>
<td>5.30</td>
</tr>
<tr>
<td>Solvent petrol ether (100 mL)</td>
<td>1.85</td>
<td>1.85</td>
<td>–</td>
</tr>
<tr>
<td>Solvent n-hexane (120 mL)</td>
<td>–</td>
<td>–</td>
<td>5.30</td>
</tr>
<tr>
<td>Total costs [CHF]</td>
<td>3.95</td>
<td>7.15</td>
<td>10.60</td>
</tr>
</tbody>
</table>

¹ FatExtractor E-500 SOX and HydroEx H-506, ² FatExtractor E-500 SOX, ³ UniversalExtractor E-800 Pro,
⁴ Alternatively use glass sample tubes with frit, price per piece
Service & Training
BUCHI Service packages

BUCHI START – The highest efficiency from the very beginning
From a professional installation to a carefree agreement that will leave you with full cost predictability and the highest possible system efficiency.  www.buchi.com/start

«Install»
- Product installation and testing
- Hands-on training from a certified technician
- Evaluation of the immediate surroundings of your new product
- Best integration of your new product into the existing infrastructure

«IQ/OQ»
- Product or system installation
- Installation and Operational Qualification

BUCHI EXACT – Certified accuracy for highest level of confidence
Receive comprehensive qualifications with all of your BUCHI products. We perform qualification services on a level that can only be achieved by the manufacturer.  www.buchi.com/exact

«OQ»
- Our one-time OQ service will provide you with all the necessary documents and certificates.
- The service team will remind you about the option for a follow-up OQ before the certificates expire.

«OQ Circle»
Buying an OQ package will grant you an additional discount on the documents and offer you priority service with automated visit scheduling.

BUCHI CARE – Unbeatable Reliability
Maintaining a heavily used device requires different parts and inspection frequencies than units that are operated occasionally. Our approach takes factors like these into consideration to provide you with an optimal yet cost-efficient solution.  www.buchi.com/care

BUCHI ACADEMY – Increase your know-how, get the edge over your competition
Expert know-how is provided by the application chemists in our competence centers in Flawil, Beijing and Mumbai and the locally available experts at our market organizations.

Our scientific support offers pre-sales feasibility studies, tailored solution offers, after sales onsite support, regular basic to advanced courses and on demand customized training.  www.buchi.com/academy
Extraction is not only sample preparation, it is a crucial step for an accurate and reliable result. Whether it is to simply measure fat, or the most demanding residue and contaminants in different matrices, our solutions cover the whole range of automated extraction methods; from Soxhlet, to hot extraction and pressurized solvent extraction.

In the most demanding of quality control environments, for high throughput, the KjelMaster K-375 automates the measurement of nitrogen and protein. First-in-class in usability, automation, user administration and advanced data management. For both potentiometric and colorimetric titration methods.

During production, it is important to be able to control quality efficiently and quickly at each step of the process, from raw materials to finished products. The BUCHI NIR Solutions are easy to use by any operator and provide reliable results even in harsh production environments.

Closely monitoring key parameters such as moisture, fat or protein is crucial in correcting deviations that may occur during any manufacturing process. BUCHI NIR-Online® analyzers continuously provide accurate measurements within seconds to guarantee maximum production efficiency.
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Kjeldahl

In the most demanding of quality control environments, for high throughput, the KjelMaster K-375 automates the measurement of nitrogen and protein. First-in-class in usability, automation, user administration and advanced data management. For both potentiometric and colorimetric titration methods.
Core messages to our customers
BUCHI creates added value

“Quality in your hands” is the guiding principle that shapes our philosophy and our actions. It challenges us to provide outstanding services that are precisely tailored to your needs. This means that we must stay in close contact with our customers. That is why we keep in touch and continue to work very hard to understand you and your business even better.

We help you by providing high-quality products, systems, solutions, applications and services that offer you added value. This allows you to focus entirely on your processes and your work.

**Competent**
We have the technological expertise and decades of experience needed to provide competent support and work with you to continually improve our services.

**Reliable**
We guarantee the quality and functionality of our equipment and will continue to help you quickly and efficiently whenever something does not operate to your satisfaction.

**Safe**
By collaborating closely with you, we do everything in our power to make our products, systems, solutions, applications and services as safe as possible for people and the environment.

**Cost-effective**
We strive to create a high level of economic benefit and maximum added value for you.

**Global**
As an international family-owned business with own subsidiaries and qualified distributors, we have a presence wherever you are located.

**Easy**
We support you by providing carefully designed solutions as well as instruments and systems that are easy to operate.

**Sustainable**
We support environmentally friendly processes and manufacture products that have a long service life. We utilize advanced technologies to leave the smallest environmental footprint possible.

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Quality in your hands