

Automate your processes  
Automate your lab  
Innovate

with *EasyPREP*  
**SAMPLE HANDLER**

## *Automated Sample Preparation*

Dispense up to 7 reagents

Dilute Samples

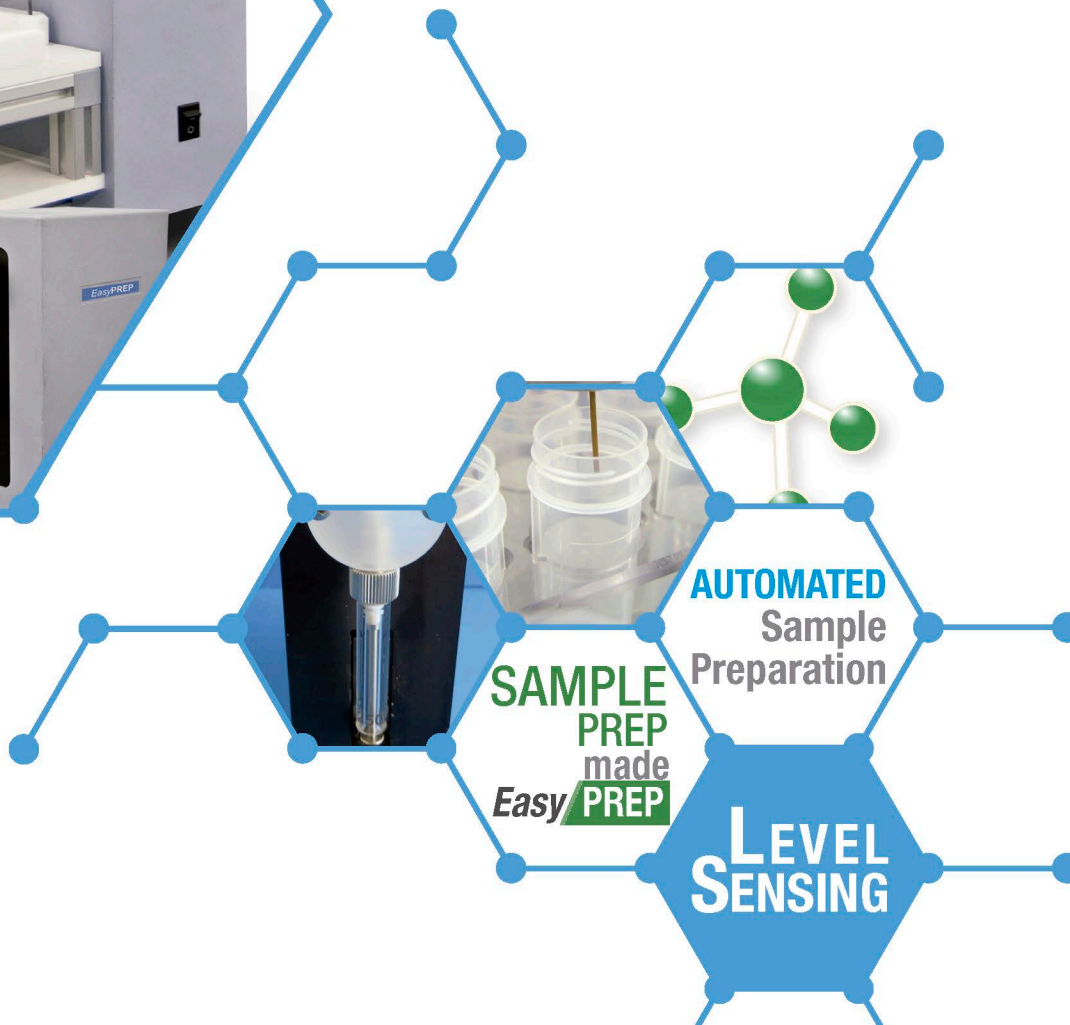
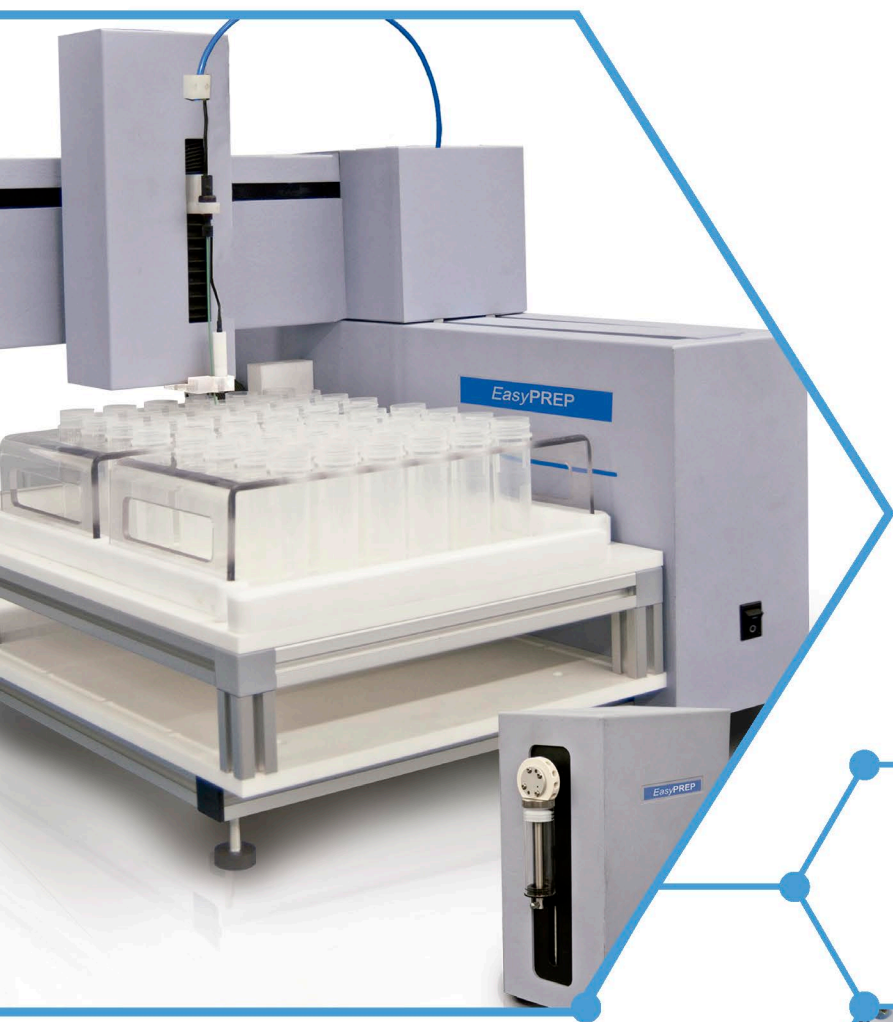
Aliquote Samples

Transfer Samples

Normalize Samples

Serial Dilutions

Prepare Calibration Curve



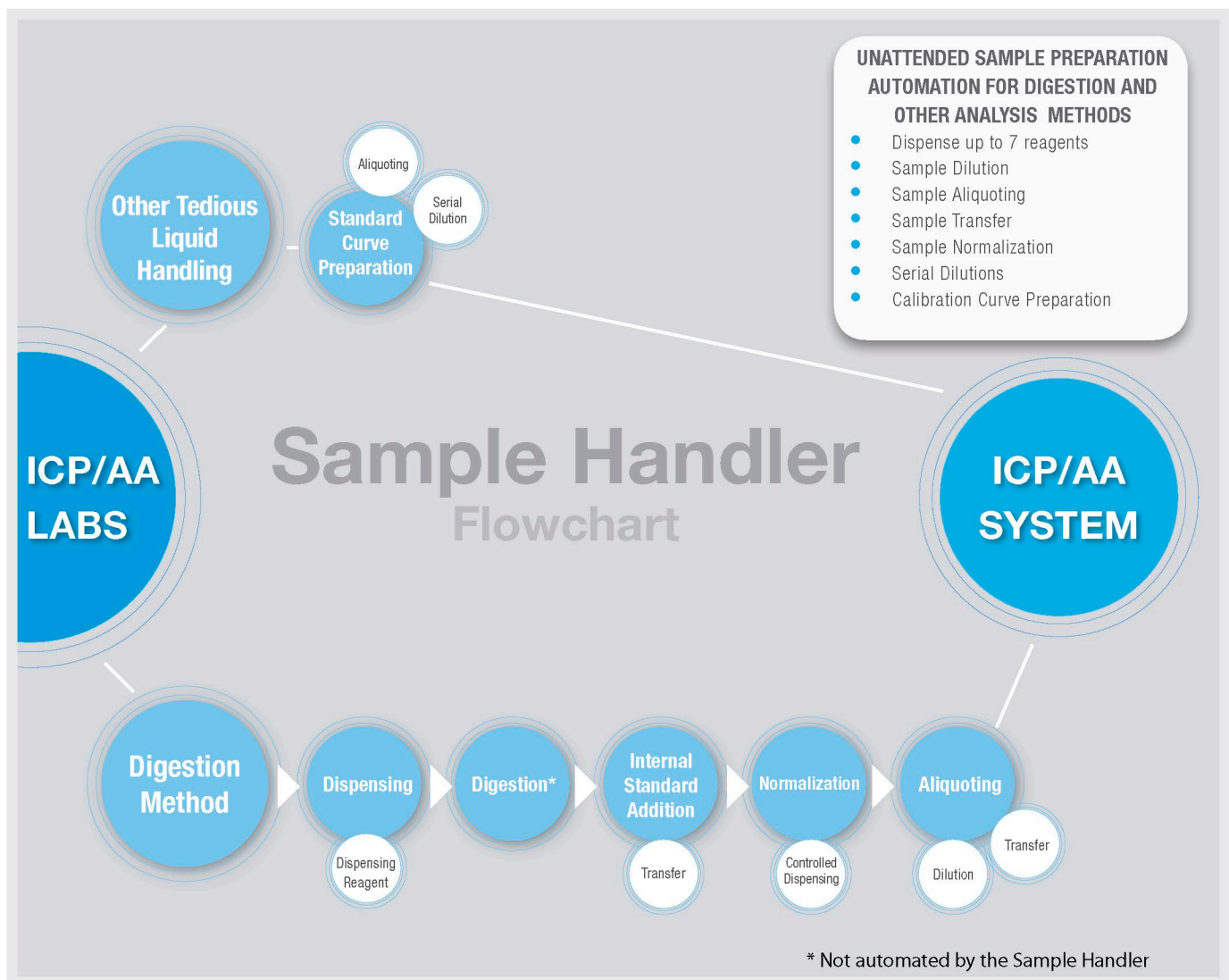
  
**QUANTANALITICA**

Via Guido Rossa 14  
23875 Osnago (LC) - Italy  
Tel. +39 039 9280061  
Fax. +39 039 9289636  
info@quantanalitica.com  
www.quantanalitica.com

**SCP SCIENCE**  
www.scpscience.com

# The **Sample Handler** is designed for **ICP/ICP-MS** labs to automate **Pre and Post Digestion** sample preparation.

- **Improve Productivity** by assigning your personnel to added value tasks.
- Ensure that the lab complies to your **Accuracy and Precision** requirements.
- **Ensure Repeatability.** Results are only reflective of sample to sample variations.
- **Quick Reference and Tracking** of result records.



## COMPATIBLE WITH MOST DIGESTION SYSTEM RACKS

Designed to adapt to most Digestion and ICP systems.

## OPERATE ON SAMPLE HANDLER USING LAB'S CURRENT DIGI AND ICP RACKS

Providing the user with all the necessary flexibility to seamlessly automate their method using the Sample Handler.

Samples can be batched and transferred to or from the Sample Handler, using the labs' existing digestion and ICP racks.

## FOR ICP/ICP-MS LABS

The Sample Handler also provides ICP/ICP-MS labs with the capability to perform other tedious liquid handling operations.

## SYSTEM CALIBRATION: DISPENSING VOLUME ACCURACY AND PRECISION

System calibration of dispensing accuracy according to ISO 8655-5 and compliant with ISO 17025

## ISO 8655-4 TOLERANCE LIMITS ARE:

Syringe Volume ml	Accuracy		Precision	
	± %	± µl <sup>a</sup>	± % <sup>b</sup>	± µl <sup>c</sup>
1	0.6	6.0	0.2	2.0
5	0.6	30.0	0.2	10.0
10	0.6	60.0	0.2	20.0
25	0.6	150.0	0.2	50.0
50	0.6	300.0	0.2	100

## NOTES:

- Calculated as deviation from the mean for 10 replicate measurements.
- Calculated as the coefficient of variation for 10 replicate measurements.
- Calculated as the standard deviation for 10 replicate measurements.

**ISO 17025  
and  
ISO 8655-5  
COMPLIANT**

### Request Instrument Certification

SYSTEM CALIBRATION OF DISPENSING  
ACCURACY CERTIFICATION  
Catalog # 010-400-050

## AUTOMATED SAMPLE NORMALIZATION

The **AccuNORM\*** executes Normalization with Class A Accuracy.

Ultrasonic Level Sensing performs Normalization in a wide range of volumes based on customer requirements.

Automated sample normalization saves time and improves precision.

## CORROSION RESISTANT

Built to work in a corrosive environment.

The Sample Handler can handle the most stringent acids such as Hydrofluoric Acid.

\*Optional



A vertical test tube on the left contains a yellow liquid. Below it are two Erlenmeyer flasks. The front flask contains a yellow liquid and has text: "±0.15ml A NS 14/23 In 20°C ISO 1042". The back flask contains a blue liquid and has "250" printed on it. The background is a soft gradient of light blue and white.

# Software Features

- Intuitive method development allows: Addition of up to 7 reagents, aliquoting and sample dilution, standard addition, reagent dispensing, and sample transfers. Normalization and non-fixed ratio serial dilution functions can also be programmed.
- Calibration Curve Preparation allows ICP/ICP-MS instrument calibration standards to be prepared.
- Insert breaks in the method to allow offline manipulation such as digestion.
- Upload pre-saved methods for fast setup of routine operations.
- Customizable rack configuration to accommodate most vessels and capacity requirements.
- Create your own rack configurations and visualize them on the screen
- Preconfigured to accommodate transfer of **DigiPREP** tube content on to **NovaWAVE** racks.
- The Inert Gas Bubble Stirrer allows sample homogenization with controlled duration, and speed at any point during the process.
- Visualization of run status in Real-Time.
- Advanced functions allow software controlled dispensing and transfer parameters based on speed, viscosity, density, etc.
- Track samples using the Barcoding capability and load sample ID list.

# Typical Sample Preparation Procedure

SAMPLES **NEVER** LEAVE THE SAMPLE TUBES WHICH **NEVER** LEAVE THE RACKS THROUGHOUT THE DIGESTION PROCESS.

The Sample Handler is designed to maximize efficiency by automating the Digestion Process while requiring the least sample transfers possible.



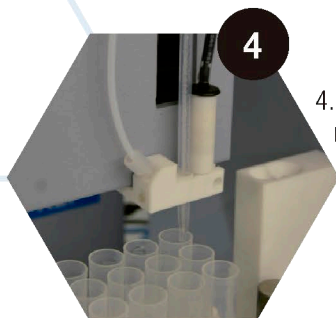
1. Weigh samples into tared 50 ml *DigiTUBE*s and insert them into a *DigiPREP* rack. Transfer the rack to the **Sample Handler**.



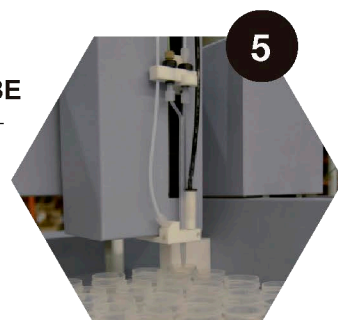
2. **Sample Handler:** Dilute, add acid and other reagents to each sample.



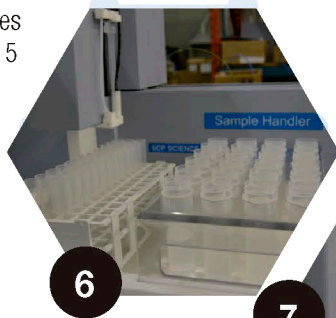
3. Transfer the rack with the 50 ml *DigiTUBE* samples from the **Sample Handler** to the *DigiPREP* digestion system. Digest samples.



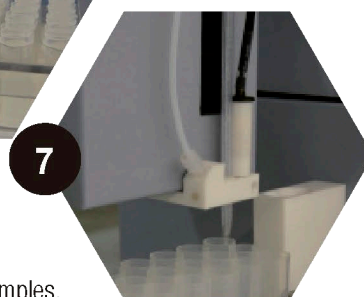
4. **Sample Handler:** Once digestion is complete, return the rack with samples to the **Sample Handler**. Add internal standard directly into each sample *DigiTUBE*.



5. **Sample Handler + AccuNORM:** Normalize the sample in the 50 ml *DigiTUBE* using *AccuNORM* with a precision of:  $\pm 0.250$  ml.



6. **Sample Handler:** Transfer samples from the 50 ml *DigiTUBE* rack to a 15 ml autosampler tube rack. Analyze by ICP or AA.



7. AA, ICP or ICP/MS : analyze your samples.

# Sample Handler Ordering Information

## STEP 1 - ORDER INSTRUMENT

Description	Catalog #
<b>EasyPREP</b> Sample Handler (110V/230V), with software	010-400-001

## ITEMS INCLUDED IN THE BASIC CONFIGURATION

Description	Catalog #
Full tray, for Sample Handler	010-400-096
Dispensing tip	010-400-025
<b>EasyPREP</b> Dispensing Tubing, (pk/7)	010-400-020

## STEP 2 - SELECT SYRINGE PUMP

Description	Catalog #
*Syringe Pump, 1 ml, 5 ml, 10 ml, 25 ml	010-400-118
Syringe Pump, 50 ml	010-400-119

\* Standard

**ISO 17025  
and  
ISO 8655-5  
COMPLIANT**

### Request Instrument Certification

SYSTEM CALIBRATION OF DISPENSING  
ACCURACY CERTIFICATION  
Catalog # 010-400-050

## STEP 3 - SELECT SYRINGE

Description	Catalog #
Syringe, 1 ml	010-400-102
Syringe, 5 ml	010-400-104
Syringe, 10 ml	010-400-108
Syringe, 25 ml	010-400-110
Syringe, 50 ml	010-400-112

## STEP 4 - SELECT RACK

Description	Catalog #
Pick and Place Rack, 3 positions, 50 ml	010-400-084
Pick and Place Rack, 2 positions, 100 ml	010-400-086
Rack, 54 positions, <b>DigiPREP</b> MS, 15 ml	010-515-027
Rack, 40 positions, <b>DigiPREP</b> Jr, 15 ml	010-515-205
Rack, for CETAC Autosampler, 12 positions, 50 ml tubes	010-510-050
Rack, for Hotblock, 18 positions, 50 ml tubes	010-500-025
Rack, 40 positions, 16 mm tubes	130-012-102
Rack, 24 positions, for <b>DigiPREP</b> Jr, 50 ml <b>DigiTUBE</b> s	010-505-021
Rack, 24 positions, for <b>DigiPREP</b> , MS/LS 50 ml <b>DigiTUBE</b> s	010-500-021
Rack, custom	PLEASE CONTACT US
Rack, <b>NovaWAVE</b> Transport Rack, 12 positions, 50/75 ml vessels	010-400-044

## ACCESSORIES

Description	Catalog #
Half tray, for use with <b>NovaWAVE</b> Transport Rack	010-400-098
Barcode reader, for rapid loading of sample identification	010-600-034
<b>AccuNORM</b> , required to normalize sample volumes	010-400-090
Bubble Stirrer, with inert gas feature	010-400-092
7 ml loop, for larger sample volumes, prevents sample from entering the syringe	010-400-048
Dispensing tip replacement, for Bubble Stirrer	010-400-093
Pierce Needle 1.2 x 0.4 L=150 w/fitting	010-400-026
Pipetting Needles Nickel-plated hub; 18 gauge; 6 in. length	010-400-022
Dispensing Tip, PEEK	010-400-024
Fume Hood, protects samples from environmental contamination and vice versa when using Sample Handler, Inside dimensions: D 37.2 x W 31 x H 31.7, Outside dimensions: D 43 x W 32.7 x H 35.7	010-400-094
PC with Windows OS	010-400-008

## TO PLACE AN ORDER

Please contact one of our sales representatives at [sales@scpscience.com](mailto:sales@scpscience.com)

or call our toll free number **1 (800) 361-6820**

or visit our website [www.scpscience.com](http://www.scpscience.com)

## INSTRUMENT DIMENSIONS

Length (X Axis)	700mm
Depth (Y Axis)	660mm
Height (Z Axis)	620mm

# Contact

## CORPORATE HEADQUARTERS

Phone: +1 (800) 361-6820  
Fax: +1 (800) 253-5549

## USA

Phone: +1 (800) 361-6820  
Fax: +1 (800) 253-5549

## FRANCE

Phone: +33 (0) 1 69 18 71 17  
Fax: +33 (0) 1 60 92 05 67

## GERMANY

Phone: +49 (0) 8342-89560-61  
Fax: +49 (0) 8342-89560-69

**CORPORATE:** Phone: +1 (514) 457-0701 | Fax: +1 (514) 457-4499

[www.scpscience.com](http://www.scpscience.com) | [sales@scpscience.com](mailto:sales@scpscience.com)



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