Automate your processes
Automate your lab
Innovate

with *Easy*PREP
SAMPLE HANDLER

Automated Sample Preparation

Dispense up to 7 reagents
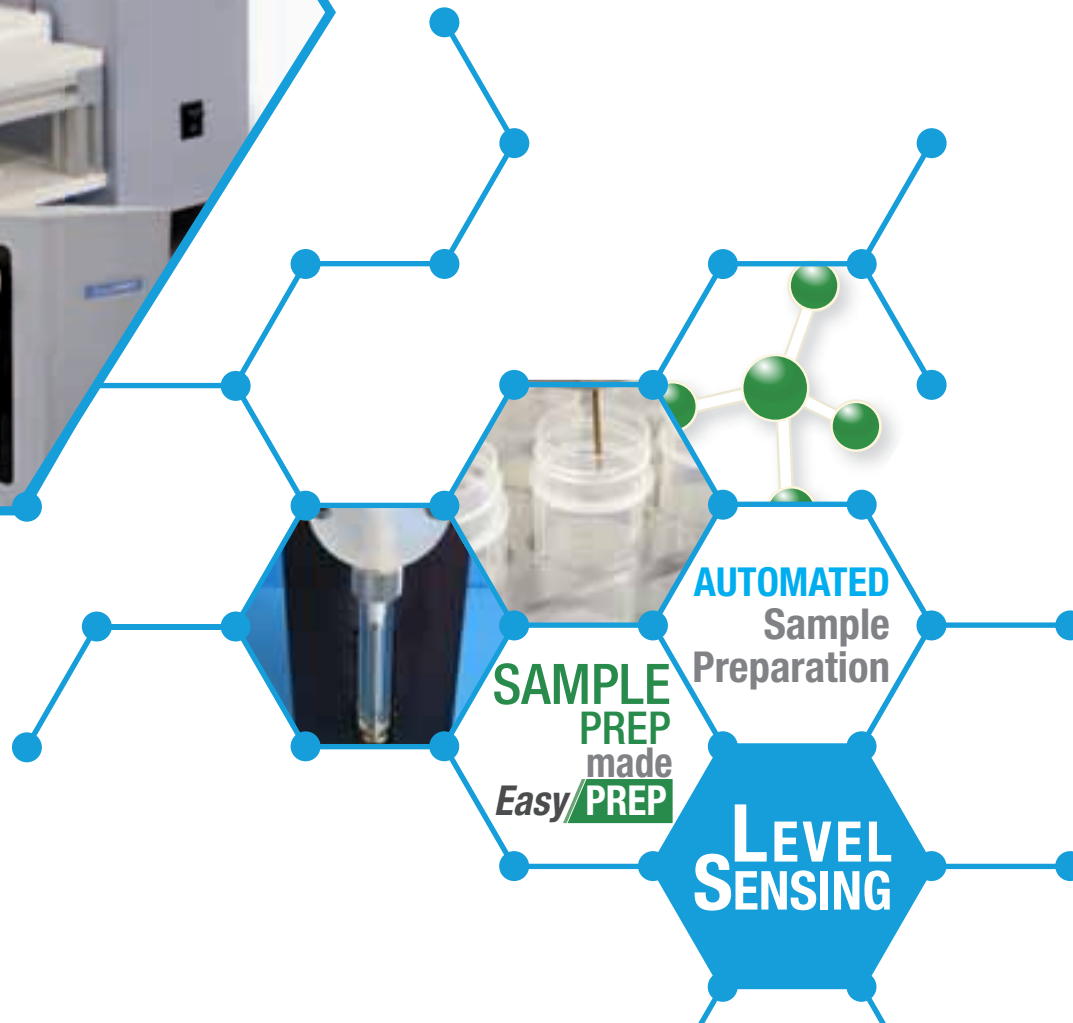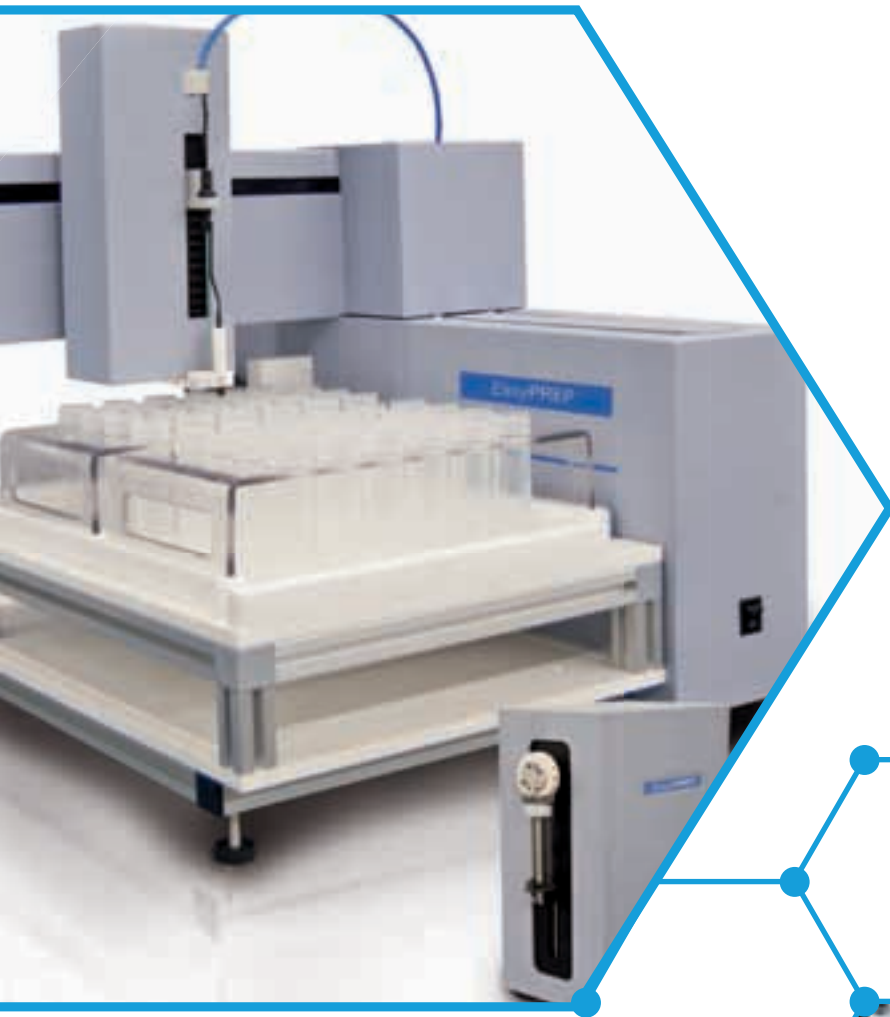
Dilute Samples

Aliquote Samples
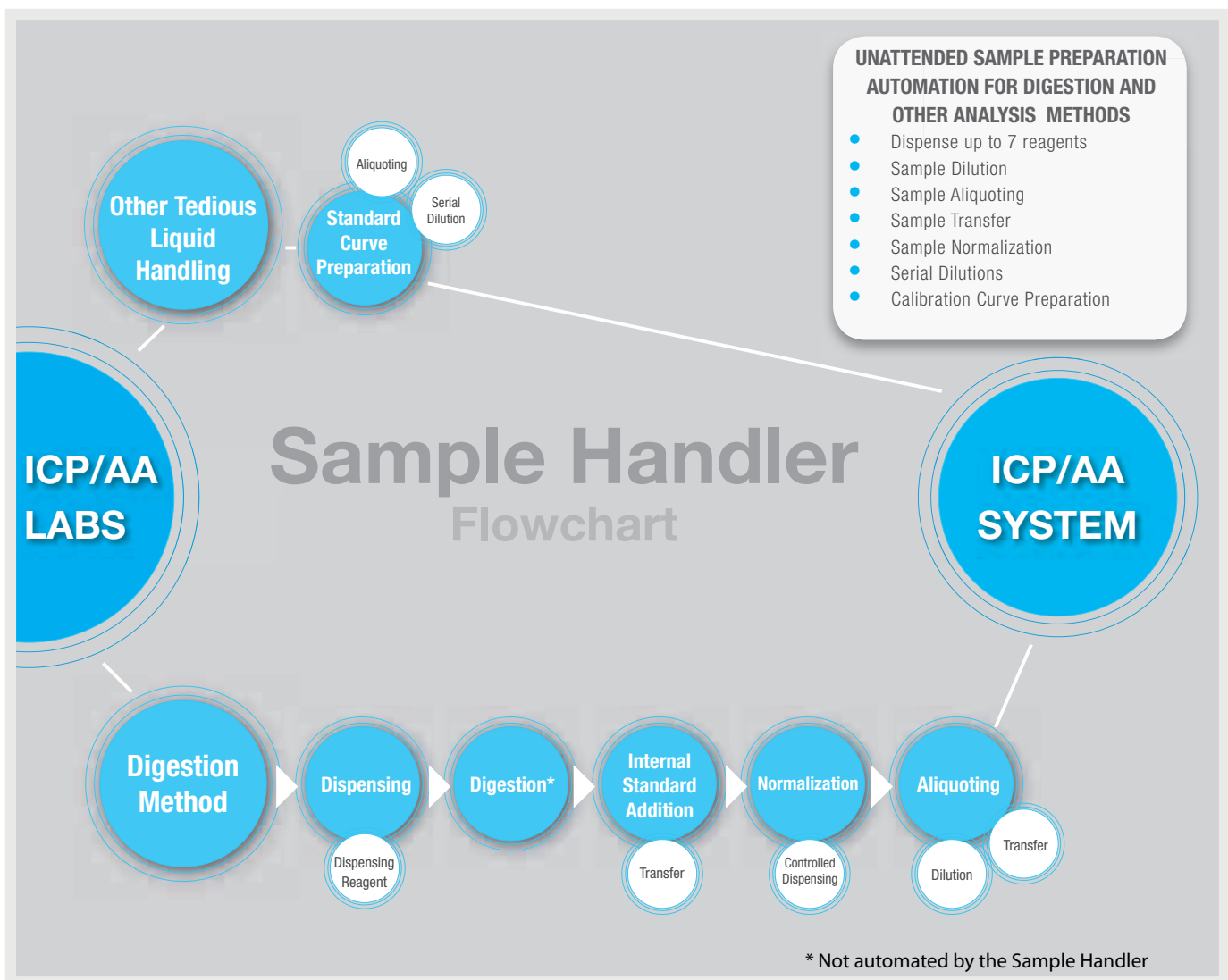
Transfer Samples

Normalize Samples

Serial Dilutions

Prepare Calibration Curve

AUTOMATED
Sample
Preparation

SAMPLE
PREP
made
*Easy*PREP

LEVEL
SENSING

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.

Sample Handler
Flowchart

UNATTENDED SAMPLE PREPARATION AUTOMATION FOR DIGESTION AND OTHER ANALYSIS METHODS
- Dispense up to 7 reagents
- Sample Dilution
- Sample Aliquoting
- Sample Transfer
- Sample Normalization
- Serial Dilutions
- Calibration Curve Preparation

Aliquoting

Serial Dilution

Other Tedious Liquid Handling

Standard Curve Preparation

ICP/AA LABS

ICP/AA SYSTEM

Digestion Method

Dispensing

Dispensing Reagent

Digestion*

Internal Standard Addition

Transfer

Normalization

Controlled Dispensing

Aliquoting

Transfer

Dilution

* Not automated by the Sample Handler

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	Accuracy		Precision	
ml	± %	± µl[a]	± %[b]	± µl[c]
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:

a. Calculated as deviation from the mean for 10 replicate measurements.
b. Calculated as the coefficient of variation for 10 replicate measurements.
c. 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 *Accu**NORM**** 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
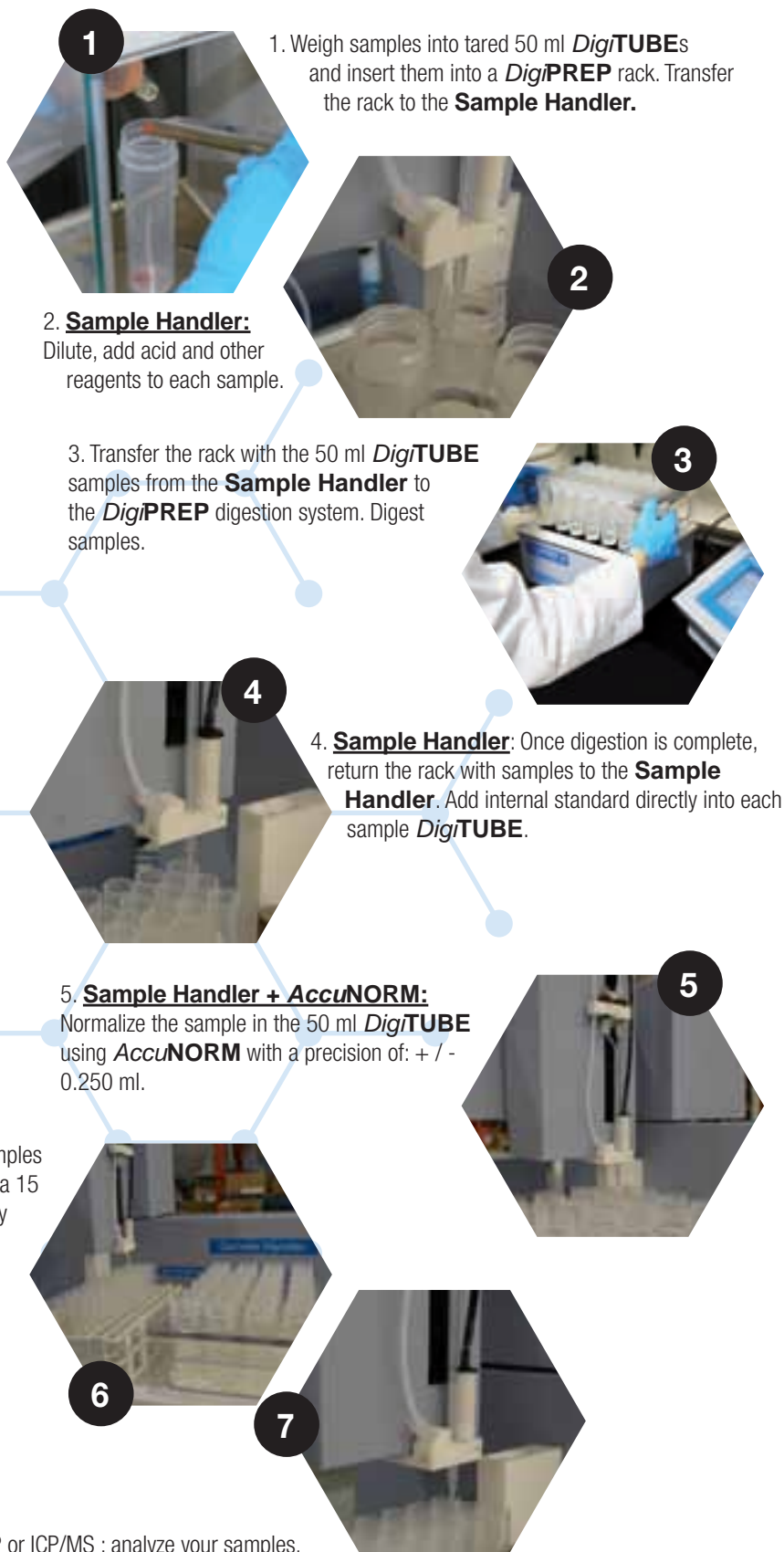stringent acids such as Hydrofluoric Acid.

*Optional

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 programed.

- 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 *Digi*PREP tube content on to *Nova*WAVE 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

1. Weigh samples into tared 50 ml *Digi*TUBEs and insert them into a *Digi*PREP rack. Transfer the rack to the **Sample Handler.**

2

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

3. Transfer the rack with the 50 ml *Digi*TUBE samples from the **Sample Handler** to the *Digi*PREP digestion system. Digest samples.

3

4

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

5. **Sample Handler + *Accu*NORM:** Normalize the sample in the 50 ml *Digi*TUBE using *Accu*NORM with a precision of: + / - 0.250 ml.

5

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

6

7

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

Sample Handler Ordering Information

STEP 1 - ORDER INSTRUMENT

Description	Catalog #
EasyPREP 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
EasyPREP 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
Syringe Pump for HF, 5 ml	010-400-109

* 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 for HF, 5 ml	010-400-106
Syringe,10 ml	010-400-108
Syringe, 25 ml	010-400-110
Syringe,50 ml	010-400-112

STEP 4 - SELECT RACK

Description	Catalog #
Rack, 54 positions, *DigiPREP* MS, 15ml	010-515-027
Rack, 40 positions, *DigiPREP* Jr, 15ml	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 *DigiPREP* Jr, 50 ml *DigiTUBE*s	010-505-021
Rack, 24 positions, for *DigiPREP*, MS/LS 50 ml *DigiTUBE*s	010-500-021
Rack, custom	PLEASE CONTACT US
Rack, *NovaWAVE* Transport Rack, 12 positions, 50/75 ml vessels	010-400-044

ACCESSORIES

Description	Catalog #
Half tray, for use with *NovaWAVE* Transport Rack	010-400-098
Barcode reader, for rapid loading of sample identification	010-600-034
AccuNORM, 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 × 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 representatices at sales@scpscience.com

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

or visit our website www.scpscience.com

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

Contact

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LEVEL SENSING

Testing made EASY/PREP

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