

## (Vehicle) portable multifunctional pre-processing instrument

# ATFD030

### Feature:

- Multifunctional: ultrasonic dissolution, centrifugation, heating, air drying
- All channels can process 6 samples at the same time
- 7-inch capacitive touch screen
- Ultrasonic dissolution time: digitally adjustable, 0 ~ 99min, resolution 1s
- Centrifugal speed, 4000rpm ~ 10000rpm, the speed is digitally adjustable
- Centrifugal working time: digitally adjustable, 0 ~ 99min, resolution 1s
- Heating temperature of water bath: 80°C
- Portable, automatic, easy to operate, etc.
- High working stability

### Application:

- Food safety testing
- Pretreatment of surface enhanced Raman inspection
- Pretreatment of biological/chemical samples

### Description:

ATFD030 multifunctional pre-processing instrument is a pre-processing equipment specially used for food safety testing, surface enhanced Raman testing and other trace detection. It integrates ultrasonic dissolution, centrifugation, air drying and water bath heating functions. It is portable, automatic and simple operation and other characteristics.

- The ultrasonic dissolving function can realize the high-efficiency extraction of the substance to be tested in the sample.
- The centrifugal function can separate the interfering components of the sample and be used to concentrate the enhancement reagents.
- The water bath heating function can realize sample extraction and concentration.
- Air drying can speed up the concentration.

The four major functions are integrated to meet the requirements of food safety testing, surface-enhanced Raman and other trace testing, and the separation and enrichment of complex systems in the process of testing actual samples.

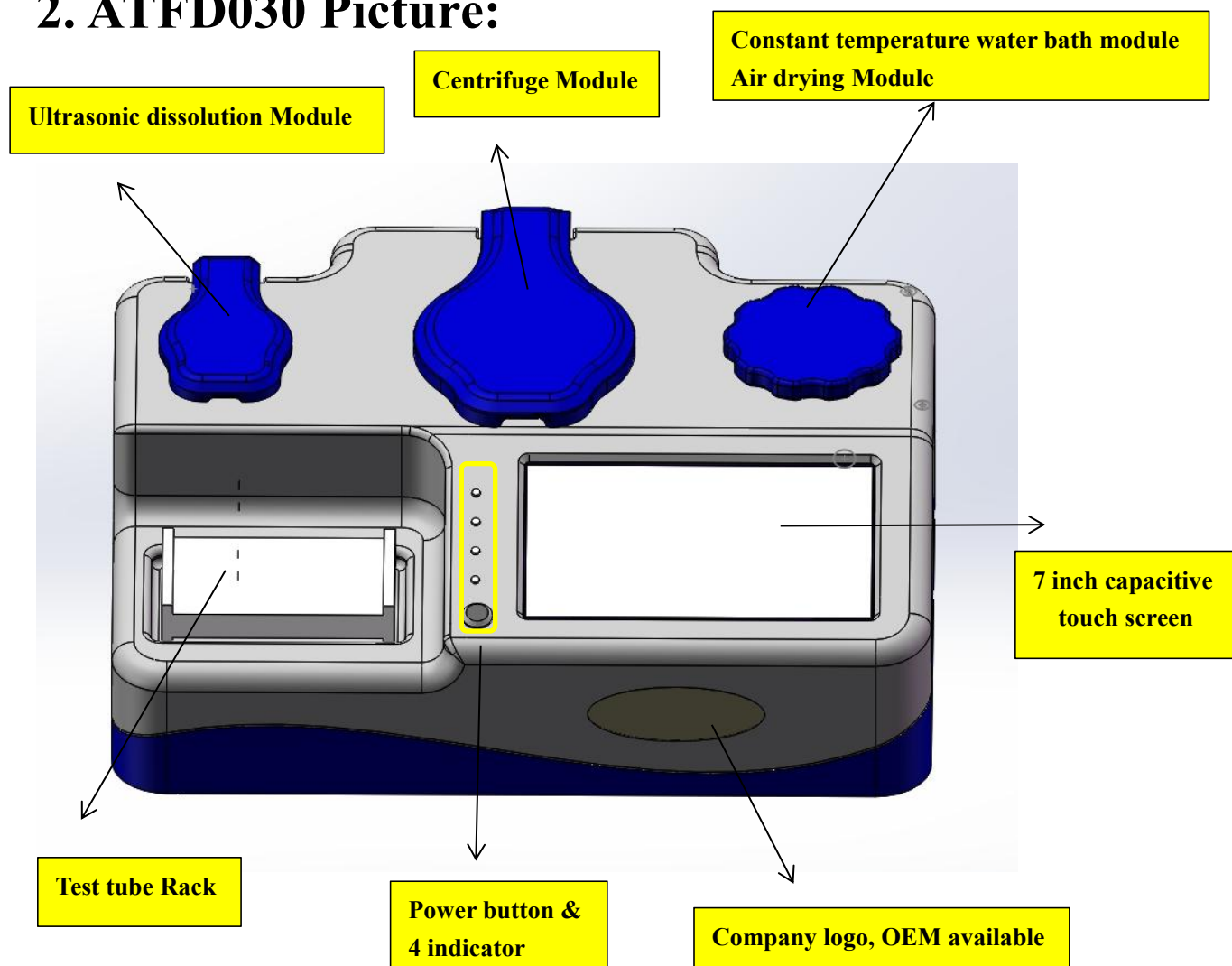
The above three functions can be adjusted through the capacitive touch screen, and the work stability is high. The ultrasonic time, centrifugal time, centrifugal speed, heating time, etc. can be adjusted as needed.

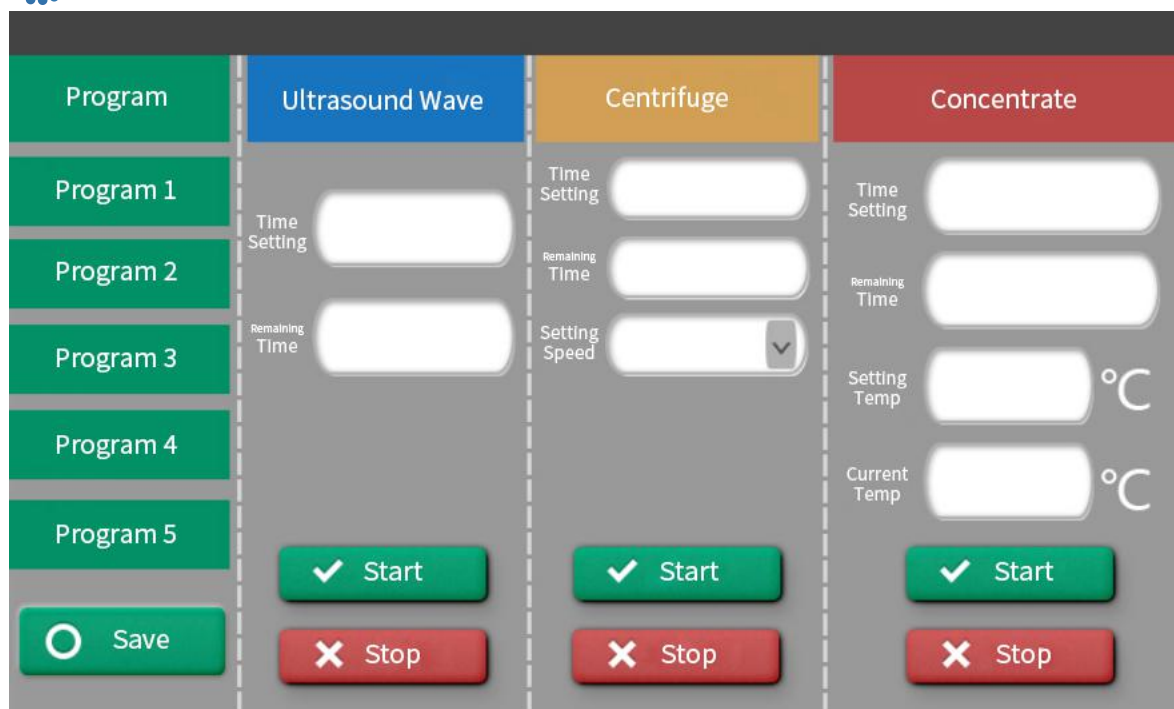


## 1. Parameter

Engineering specifications	Parameter
<b>Water-bath heating module</b>	
Water-bath heating Temp	80°C
Water-bath heating pool capacity	50ml
Water-bath heating sample bits	6 bits
Water-bath heating Time	Digital adjustable, 0 ~ 99min, resolution 1s
<b>Air drying module</b>	
Air flow rate	18L/min
Air dry the sample bits	6 bits
<b>Ultrasonic dissolution module</b>	
Ultrasonic frequency	40 KHz
Ultrasonic dissolution tank capacity	50ml
Ultrasonic dissolution of the sample bits	6 bits
Ultrasound time	0 ~ 99min, resolution 1s
Ultrasonic cell size	Φ70mm×55mm
<b>Centrifuge module</b>	
Maximum number of centrifugal revolutions	>10000rpm, Adjustable speed
Test tube hole position	6 holes
<b>Whole machine</b>	
Power Adapter	220V/50Hz
Total power	160W
Environmental conditions	Temp: -10 ~ 40°C, Humidity: ≤85%
Weight	7 KG
Dimension	345mm×290mm×150mm

## 2. ATFD030 Picture:





**Figure 1** The man-machine interface of ATFD030 multifunctional pre-processing instrument



**Figure 2** The man-machine interface of the multi-function pre-processing instrument



## 3. Company Profile

Optosky company is a first-class spectroscopy solution provider, with the headquarter located in the 7<sup>th</sup> floor of the research institute of the Chinese Academic of Science at an area of 2500 square meter in Xiamen city where successfully held the international 9<sup>th</sup> BRICK summit in 2017. The subsidiary company located in Wuhu city with an area of 2035 square meters.

The company founder Dr. Hongfei Liu graduated Doctor degree from the Chinese Academic of Science and postdoctoral degree from Xiamen University, by integrating both of top Universities' spectroscopy technology background into Optosky company aiming at developing the leading spectroscopy equipment in the world.

The company bases on unique technologies of Optomechanics, Spectroscopy Analysis, Process Weak Optical and Electrical Signals, Cloud Computing, and have been developed wide products line of the competitive Raman spectroscopy instruments, micro spectrometer, hyperspectral imager, field spectroradiometer, fluorescence spectroscopy, LIBS etc. Driven by advanced technologies and products, Optosky brand has been well-known to customers all over the world.

Optosky company base on technology innovation, market-driven direction, customer first, provides first-class products and services, and one-stop solutions to many fortune 500 companies in many industries. The company received praise from different industry companies, as well as many innovative intellectual properties, software copyright, qualification certification, and winner awards over hundred numbers.

Optosky receives top class A introduced the high-tech company to international Xiamen city, the national high-tech and new innovative technology company award. The founder Dr. Hongfei Liu receives the innovation talent award by the ministry of science and technology.



The company is currently conducting the exclusive project of major industrialization national oceanic administration with a total fund of five million us dollars. The company in charge of drafting national industry standard of VNIR and SWNIR Field Spectroradiometer, and six national standard drafters, including China National Standard Drafter for Hazmat detector based on Raman spectroscopy, China National Standard Drafter for Buoy-type Monitor eco-environment, China National Standard Drafter for water quality monitor in the unmanned boat, China National Standards drafter for online water quality monitor by spectroscopy, China National Standard Drafter for UV-absorbent measure fabrics.

The company has over 70 IPs and over 20 innovative patents.

The company received ISO9001:2015 certification, CE certification, Police Administration Certification, FDA approval compliant, IQOQPQ compliant.



Figure 1 Optosky (Xiamen) Photonics Inc. Company Headquarter

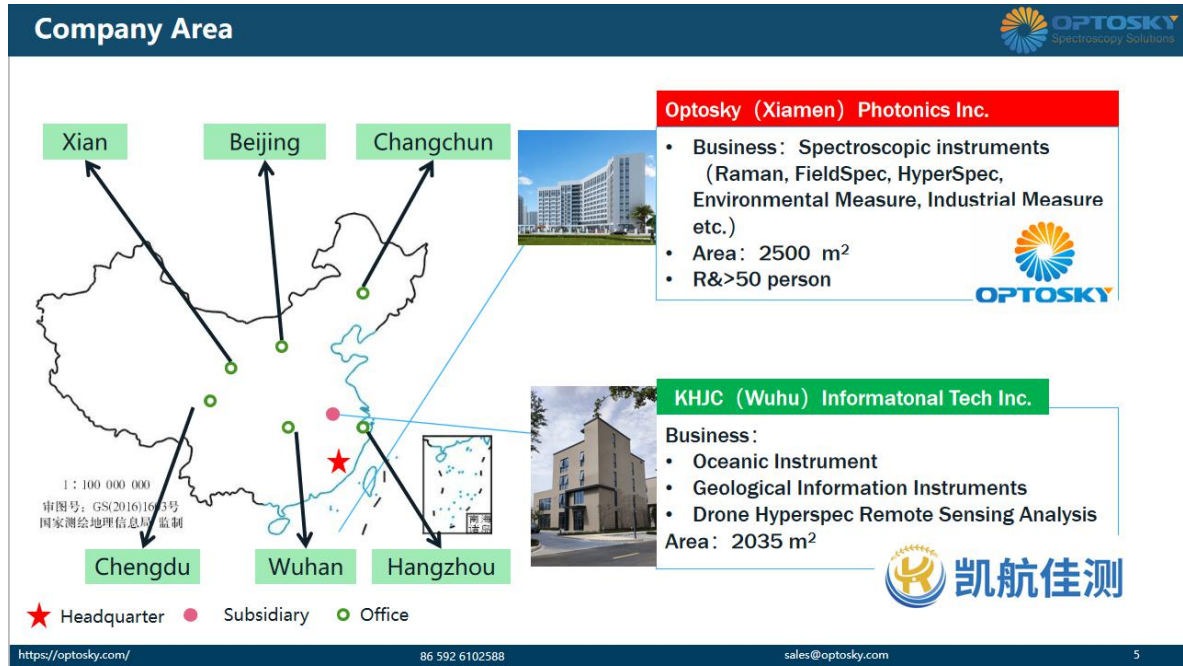


Figure 2 Optosky Company Area

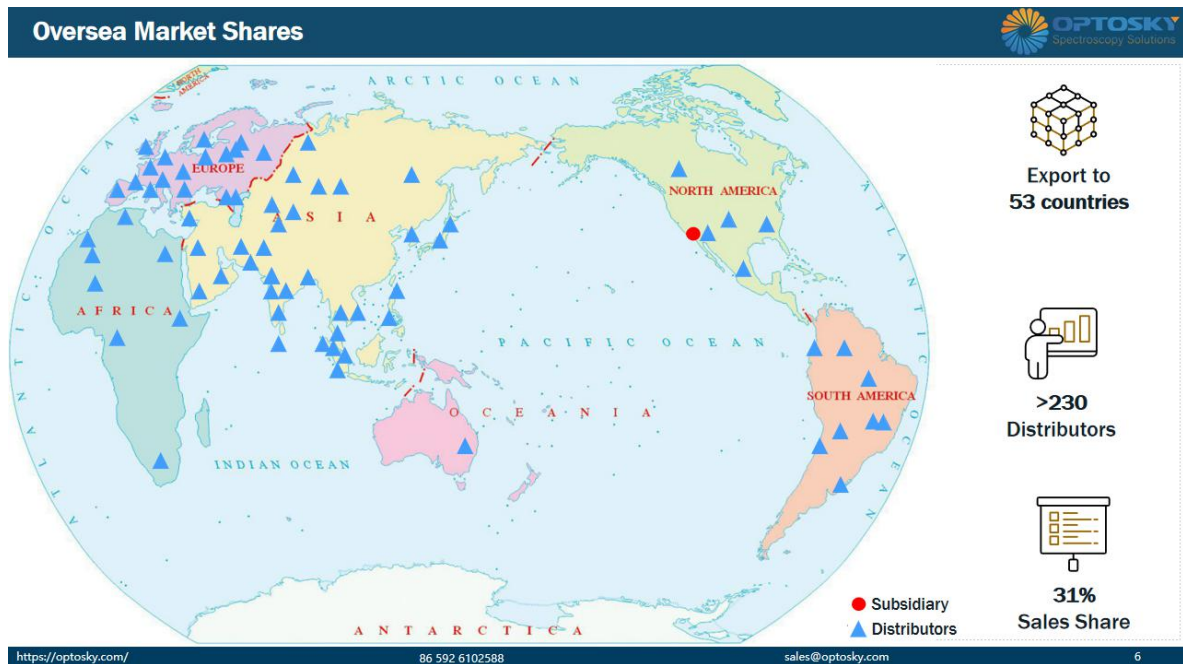


Figure 3 Oversea Market Shares

## Optosky Chair and Draft National Standards Lists:

Chair Drafter			
National Industry Standard Of VNIR & SWNIR Field Spectroradiometer		China National Standard Drafter for Buoy-type Monitor eco-environment	China National Standard Drafter for water quality monitor in unmanned boat
China National Standard Drafter for Raman spectrometer	China National Standard Drafter for Hazmat detector based on Raman spectroscopy	China National Standards drafter for online water quality monitor by spectroscopy	China National Standard Drafter for UV-absorbent measure fabrics

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Figure 4 Optosky Chair and Draft National Standards Lists.

## Qualification

	 ISO9001:2005	 GB/T 23001 Informationization & Innovation	 CE, RoHS, LVD 17 models	 Police Approval 11 models
	 GB/T 29490 IP implementation	 5 Innovative patents	 35 patents new utility design	 32 Software copyright

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Figure 5 Qualification



## Informationization & Industrilization Fusion Management System

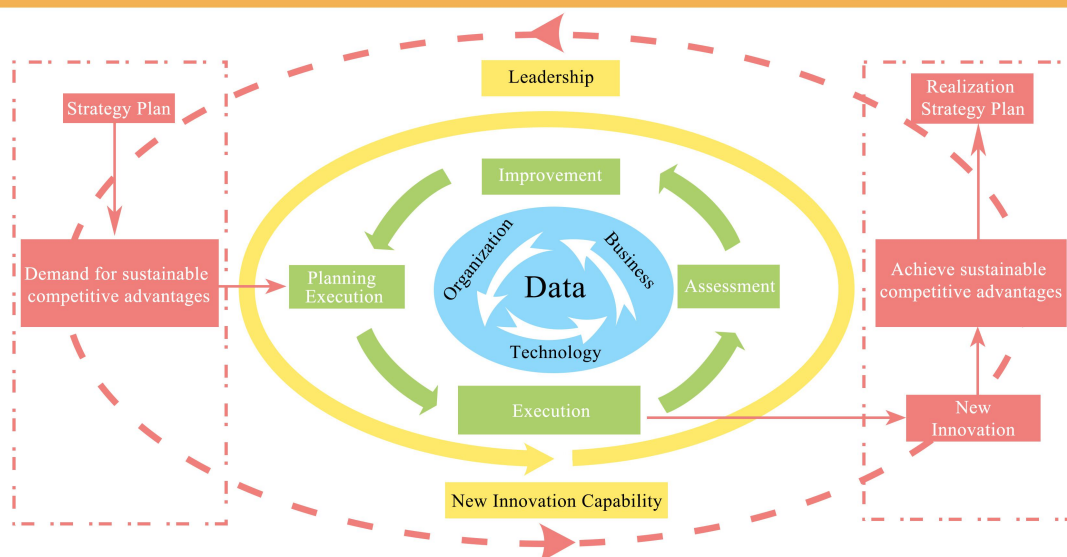


Figure 6 GB/T 23001\_Informationization & Industrilization Fusion Management System

### Co-Founder—Dr. Hongfei Liu



**Postdoctoral Hongfei Liu**

- Selected "Innovative Talent" by Science and Technology ministry
- Top Class A Talent by Xiamen City
- CCTV Science & Technology Interview
- Fortune 500 experience in Agilent, II-VI

- Honors**
  - Selected by science & technology ministry as "Innovation Talent"
  - CCTV Science & Technology Interview
  - Top Class A Talent credited by Xiamen City
  - Innovation Hero**
- Education**
  - PhD • Chinese Science of Academic • Prof. Gui-Lin Chen, Originator in spectroscopy
  - Postdoctoral • Xiamen University • Prof. Zhong-Qun Tian guided by the SERS founder M.Fleischmann
- Career**
  - Engineer → R&D Manager → GM
  - Agilent**, Leader of instrument, Fortune 500 company, Job: engineer
  - II- VI Incorporated (Nasdaq: IIVI) leader in optical & electrical industries, Job: GM of Instrumentation and Automation
- Academic**
  - University graduate tutor
  - obtain more than 60 IPs, more than 10 Innovation patents;
  - Publish more than 20 papers, 2 recorded SCI, 8 recorded EI



Selected "Innovative Talent" by Science and Technology ministry

Top Class A Talent by Xiamen City

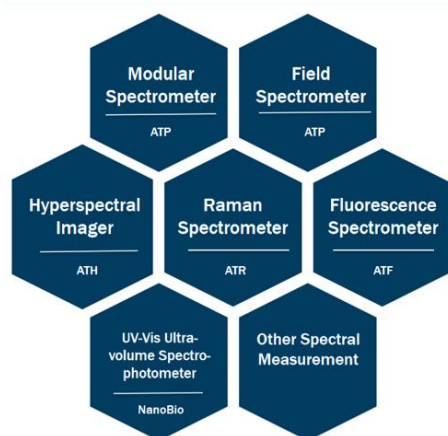
Founder & Tutors

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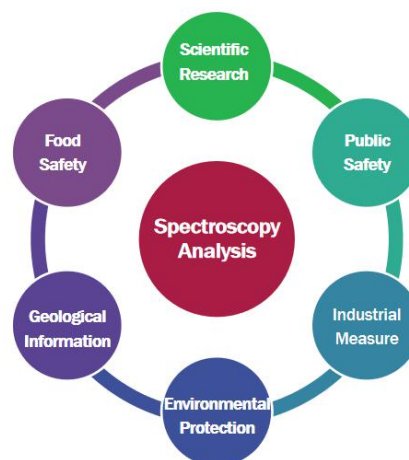
Figure 7 Optosky's Co-founder\_Dr. Hongfei Liu

## Category & Application

### Category



### Application



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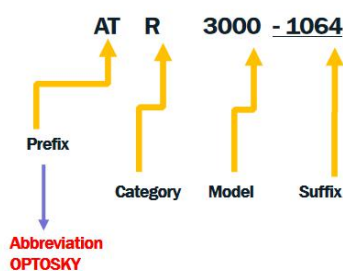
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Figure 8 Category & Application

## Model Name Rule

### Model Name Rule:

- Prefix
- Category
- Model
- Suffix



- **ATR** – Raman Spectrometer
- **ATP** – Micro Spectrometer
- **ATH** – Hyperspectral Imager
- **ATF** – Micro Fluorescence Spectrometer
- **ATL** – LIBS
- **ATW** – Water
- **ATE** – Environment Protect
- **ATFD** – Food Safety
- **GA** – Public Safety (**Gong An**)
- **GF** – Gas Monitor (**Gas Finder**)
- **GY** – Industrial Monitor (**Gong Ye**)

eg:

- Raman Microscope: ATR8300MP-1064
- Hyperspectral Imager: ATH9500

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Figure 9 Model Name Rule