



PEAK KIT U.S. Army / USMC

## Petroleum Expeditionary Analysis Kit ATPD-2424A



(Image Source: <https://www.marforres.marines.mil/News-Photos/Photos/igphoto/2003047883/>)

PEAK Kit provides a full suite of mobile tests to determine fuel quality in hardened waterproof carrying cases compliant to ATPD-2424A.

- JF-1A-ST Hand Held Conductivity ASTM D2624
- Digital Portable Density Meter ASTM D7777
- Hydro-Light Free Water Detector ASTM D3240
- Portable Particle Counter ASTM D7619 (Equivalent)
- Measurement Of Fuel System Icing Inhibitors FSII ASTM D5006
- CCCFP Continuous Closed Cup Flashpoint ASTM D6450 (USMC)



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## PEAK Hardened and Waterproof Case(s)



1. The PEAK Kit comes in two versions: U.S. Army Peak Kit and USMC Peak Kit. The Marine Corps case is a large single case that also includes an additional test method CCCFP Flash Point. The Army case is comprised of two smaller cases, which allows for a single person carry under U.S. Army specifications.
2. The PEAK Cases are all field-tested and military-hardened according to ATPD-2424A specifications, covering ambient temperature, UV light resistance, solar radiation exposure, waterproofing, rain, sand, dust, and aging.

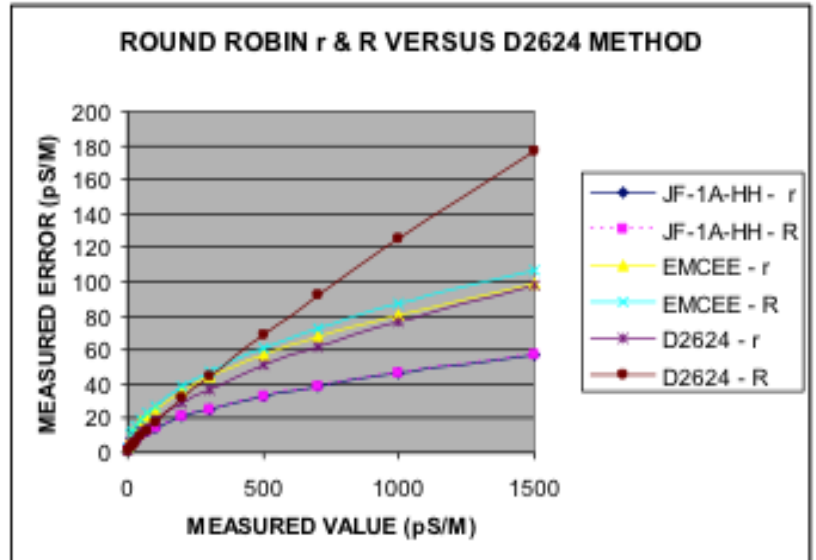
## Conductivity Measurement JF-1A-ST Stick Handheld



Typical Specifications	
Accuracy:	Listed in ASTM D2624
Measurement Range:	0-2,000 pS/m
Temperature:	-30°C to 50°C
Operational Temperature:	-30°C to 50°C
Storage Temperature:	-33°C to 55°C
Temperature Accuracy:	+/- 0.5°C
Resolution:	0.1 pS/m and 0.1°C
Data Output:	IRD Data IN/OUT
Sensor Tip:	316 SS/PEEK/VITON Patented AC Technology
Power Supply:	AAA Lithium Battery's



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### Advantages of the JF-1A-ST Stick Handheld...

3. Ergonomic and rugged: easy to use one button tough design; perfect for use in harsh environments even with thick gloves on.
4. ASTM D2624 Listed, with highest available accuracy due to AC Measurement Technology.
5. Provides digital reading of conductivity, and temperature of sample. Values toggle on display for 30 seconds after sample is taken.
6. AC Measurement technology allows for measurement of conductivity in any sample container, no need to relax fuel.
7. Long Battery life due to low power consumption and auto power off function. AAA Batteries can be bought locally and replaced easily.
8. Custom measurement ranges available consult D-2 for options.
9. Same sensor tip technology as our JF-1A-HH handhelds and JF-1A In Line sensors.
10. Lifetime support from D-2 Inc, including a one-year limited warranty on the equipment. We are here to provide support and offer expertise on the readings you are getting in the field.
11. -30° C to 50°C temperature range allowing a wide range of user measurement locations.
12. Field calibration obtained via IRD data link, no need to open the unit.
13. Full validation/calibration can be obtained via USB driven simulator or standalone device. Both available from the factory. Standard range only, at this time.



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## JF-1A-ST Stick Handheld Conductivity Images



### JF-1A-ST-VC (-USB) or (-SEF)

Full validation/calibration can be obtained via USB (-USB) driven simulator or standalone device (-SEF). Both available from the factory. Standard range only, at this time. Pictured is the USB Version.



### Field Proven Highly Durable Technology

The Stick Handheld uses the same technology as our field proven and tested JF-1A-HH handhelds, which are the most accurate technology in the industry. We took that technology and made it even more durable and compact

## Density Measurement Anton Paar DMA 35



Typical Specifications	
Accuracy:	Listed in ASTM D7777
Measurement Range:	0 g/cm <sup>3</sup> to 3 g/m <sup>3</sup>
Temperature:	0°C to 40°C (32°F to 104°F)
Viscosity:	0 mPa·s to 1000 mPa·s
Accuracy:	Density: 0.001 g/cm <sup>3</sup>
	Temperature: 0.2°C (0.4°F)
Repeatability:	Density: 0.0005 g/cm <sup>3</sup>
	Temperature: 0.1°C (0.2°F)
Resolution:	Density: 0.0001 g/cm <sup>3</sup>
	Temperature: 0.1°C (0.1°F)
Reproducibility, s.d.	Density: 0.0007 g/cm <sup>3</sup>
Ambient Temperature:	-30°C to 50°C (14°F to 122°F)
Internal Memory:	1024 Measurement Results
Power Supply:	2 AA 1.5V Alkaline Batteries
Sample Size:	2 mL
Dimensions:	140 mm x 138 mm x 27 mm
Weight:	345 g (12.2 Ounces)



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### Advantages of the DMA 35 Density Meter...

**Reports Density API @ 15°C**

**A rugged lightweight instrument to accompany you all day long**

- The lightest portable density meter on the market
- Flat design, easy to carry and store
- Fits into tight spaces in between narrow racks (e.g. in the winery or in battery production)
- Protective suitcase, rubber housing, and carrying strap available to support secure on-site operation
- Leak-proof design (IP54), ready to cope with sample spills
- The wetted parts have proven resistance to common samples – from solvents to acids.

**The benefits of a handheld density meter over a glass hydrometer**

- No waste of sample: only 2 mL required
- Sample is taken directly from the container using the built-in pump
- Integrated conversion tables: results are shown in the preferred unit without the need for further calculations
- Wide measuring range: one digital instrument replaces a whole set of hydrometers
- Automatic temperature compensation: results available in seconds
- Storage of data and easy data transfer: no chance for errors when writing down results manually
- User-independent results

**Smart features to streamline your daily workflow**

- Backlit display and measuring cell for convenient operation, also in dark surroundings
- Store and select sample IDs to allocate a measured result to a sampling location
- Stored results are conveniently printed or exported via the integrated IrDA interface



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## Continuous Closed Cup Flash Point CCCFP EraFlash



Typical Specifications	
Test Methods:	ASTM D6450, ASTM D7094, IP620, SH/T 0768, US D.O.T / RCRA / NAVY and NATO reference methods
PBT - Peltier Boost Technology®	High speed heating & cooling -25 °C to 420 °C (-13 °F to 788 °F) with a single analyzer
CPT - Contamination Prevention Technology™	Advanced electrode protection and self-cleaning ignition system to minimize cleaning and maintenance
QuickCal™	In-situ calibration with eralytics unique calibration cups without the need of dismantling the instrument
Temperature Range:	-30°C to 50°C (90% Humidity)
Temperature Stability:	0.1 °C (0.2 °F)
Sample Throughput:	12 Samples Per Hour
Internal Memory:	100,000 Detailed Test Reports
Power Supply:	PEAK Battery
Sample Size:	1 mL (ASTM D6450), 2 mL (ASTM D7094, IP620)
Dimensions:	19.6 cm x 31.5 cm x 17.5 cm
Weight:	6.8 kg aka 15.1 lbs

## CCCFP EraFlash Advantages...

### THE SAFE SIDE OF FLASH POINT TESTING

The flash point tester ERAFLASH measures in full compliance with the Continuously Closed Cup flash point testing methods ASTM D6450, ATPD-2424A. The sample volume is only 2 ml. During measurements an electric arc ignites the sample vapor, and the analyzer determines the flash point by the pressure change inside the closed cup. Flash point testing was never safer and easier.



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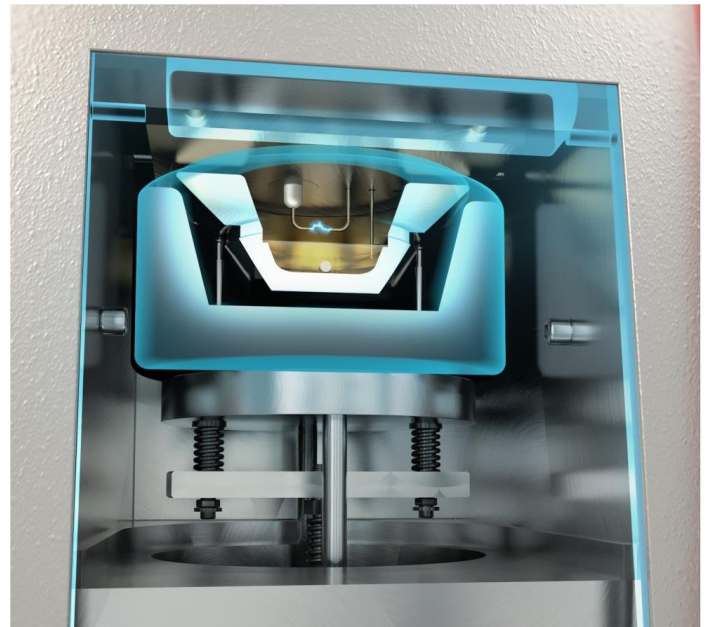


### FUEL Specifications Testing

- Fuel oil (ASTM D396)
- Diesel fuel (ASTM D975)
- Gas turbine fuel oil (ASTM D2880)
- Kerosene (ASTM D3699)
- Diesel Fuel, Biodiesel Blend (ASTM D7467)

### Unmatched Range Meets High Performance

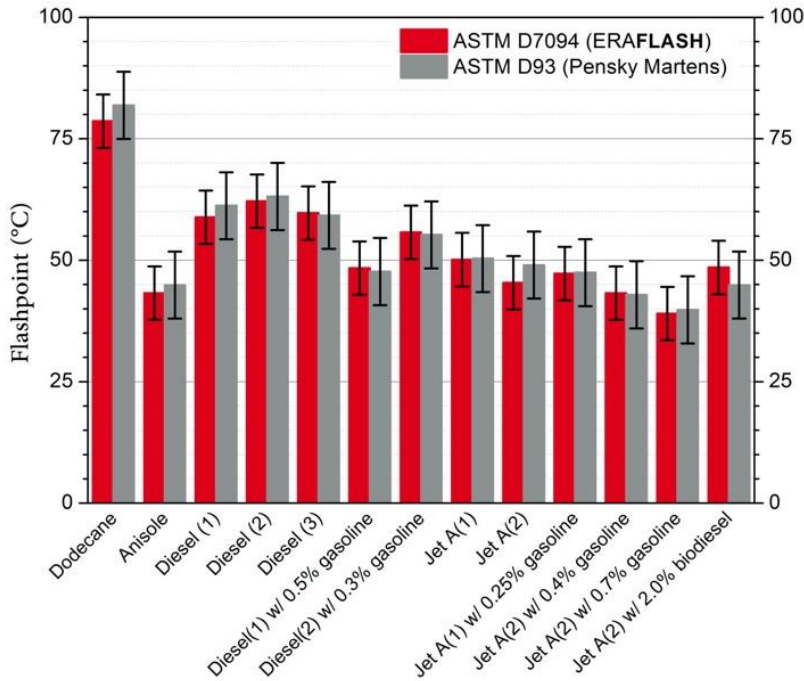
Eralytics' patented PBT – Peltier Boost Technology® allows flash point testing to  $-30\text{ }^{\circ}\text{C}$  and above  $200\text{ }^{\circ}\text{C}$  ( $392\text{ }^{\circ}\text{F}$ ) with a single instrument. This technology separates the Peltier elements during the heat up from the oven to prevent any damage to them at high temperatures.



At  $50\text{ }^{\circ}\text{C}$  ambient it can perform a  $5\text{ }^{\circ}\text{C}$  start, at  $-30\text{ }^{\circ}\text{C}$  it can perform a  $82\text{ }^{\circ}\text{C}$  finish in accordance with the ATPD-2424A requirements, all while meeting the testing endurance requirement running on 1 PEAK Kit Standard Battery.



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**High Sample Throughput with Minimum Maintenance**

The innovative PBT – Peltier Boost Technology® allows previously unmatched heating and cooling rates, which in combination with the low sample volume decreased the turnaround time significantly for flash point testing. Additionally the CPT – Contamination Prevention Technology™, which is a combination of advanced electrode protection and self-cleaning procedures, reduces the time required for cleaning and maintenance to an absolute minimum.

## Hydro-Light Digital Free Water Detector JF-WA1



Typical Specifications	
Accuracy:	Listed in ASTM D3240
Measurement Range:	0 – 50 ppm
Accuracy:	+/- 1 ppm
Resolution:	0.1 ppm
Ambient Temperature:	-30°C to 50°C
Power Supply:	External Provided Lithium Battery
Sample Size:	500 mL
Dimensions:	4" x 4" x 4"
Weight:	2.5 lbs
NSN Numbers:	JF-WA1-N: NSN 6640-01-642-9285 JF-WA1-AF: NSN 6640-01-680-6773





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### Measurement Device Field Verification



### Hydro-Light Advantages...

- Listed in ASTM D3240 “Standard Test Method for Undissolved Water In Aviation Turbine Fuels”
- Fully automated portable device produces greater accurate and reliable results.
- Comes with an optical verification standard shuttle. Provides field confirmation that the instrument has maintained its’ factory calibration. **Provides 10 year Calibration Cycle.**
- No maintenance required. Uses LED technology and will last > 45 years even if left on the entire duration.
- Highest precision of any instrument available for test method ASTM D3240. Precision is approximately four times as accurate in terms of repeatability and reliability.
- Uses the standard 25mm test pads, as all other instruments in ASTM D3240.
- Measures full range of 0-20 ppm with one sample size.
- Dramatically reduce your current repair & maintenance issues with the Hydro-Light.
- JF-WA1-N: NSN 6640-01-642-9285
- JF-WA1-AF: NSN 6640-01-680-6773
- JF-WA1-M: United States Marines Corps Version



# PEAK KIT U.S. Army / USMC

## Portable Particle Counter



Typical Specifications	
Accuracy:	ASTM D7619 Equivalent
Measurement Range:	4 $\mu\text{m(c)}$ to 100 $\mu\text{m(c)}$
Size Bands:	$\geq 4 \mu\text{m(c)}$ , $\geq 6 \mu\text{m(c)}$ , $\geq 14 \mu\text{m(c)}$ , $\geq 30 \mu\text{m(c)}$
Sample Volume:	80 mL for ASTM D7619, 20 mL test
Cts Per Measurement:	60,000 per mL
Ambient Temperature:	-30°C to 50°C (14°F to 122°F)
Power Supply:	External Provided Lithium Battery
Results:	900 Results
Dimensions:	25 cm x 14.5 cm x 35 cm
Weight:	7.5 kg
Power Consumption	PEAK Battery Pack
Portability:	Can Be Equipped With a Back Pack

## D-2 Particle Counter Advantages...



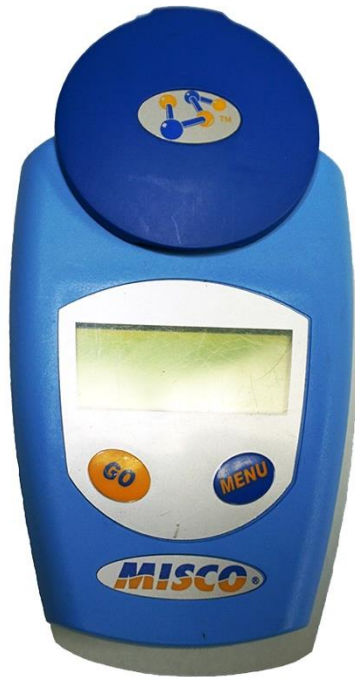
### Mobile Rugged Particle Counter

- The most mobile particle counter in existence, with a backpack carrying option.
  - The rugged design can withstand extreme weather conditions and still operate effectively.
  - Can Be powered with the PEAK Kit supplied lithium battery.
  - ASTM D7619 Equivalent Accuracy to determine fuel quality.
  - Military Hardened Design
- ISO 11171 Calibrated
  - ATPD-2424A Compliant
  - High Resolution Color Display



## PEAK KIT U.S. Army / USMC

### Palm Abbe PA202 Digital Refractometer FSII



Typical Specifications	
Accuracy:	ASTM D5006
Measurement Range:	0.0 to 85.0 Brix 1.3330 to 1.5040 nD
Precision:	+/- 0.1 Brix +/- 0.0001 nD
Sample Volume:	0.3 mL
Temp. Comp. Range:	-30°C to 50°C
Measuring Time:	> 5 seconds
Power Supply:	2 x AAA Batteries
Battery Life:	4000+ Readings
Dimensions:	145 mm x 75 mm x 37 mm
Weight:	250 grams (8.8 oz.)

### PA202 FSII Detector Advantages...

The Palm Abbe refractometer is fast, convenient, and easy to use. Simply place a drop or two of fluid in the well and press a button on the key-pad. The custom-designed microprocessor delivers a nearly instantaneous readout in refractive index, degrees Brix, or any one of a thousand different units of measure, allowing you to read directly in the units you desire. Nonlinear temperature compensation is automatic and ensures that fluids read between -30°C and 50 °C are measured accurately.

The large dual-line LCD display is easily read, even in dim light, and removes the subjectivity associated with interpreting where a boundary line crosses tiny scale divisions.

And, it is so easy to use! The user interface consists of two buttons, one to take readings and the other to step through various menu options.



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### Rugged Ergonomic-Design

The Palm Abbe fits like a glove in the palm of your hand. The weight of its evenly-balanced design can be held easily in any size hand, even during extended periods of use. The positive response buttons on the keypad provide tactile feedback to the operator when pressed.

### Easy to Use...



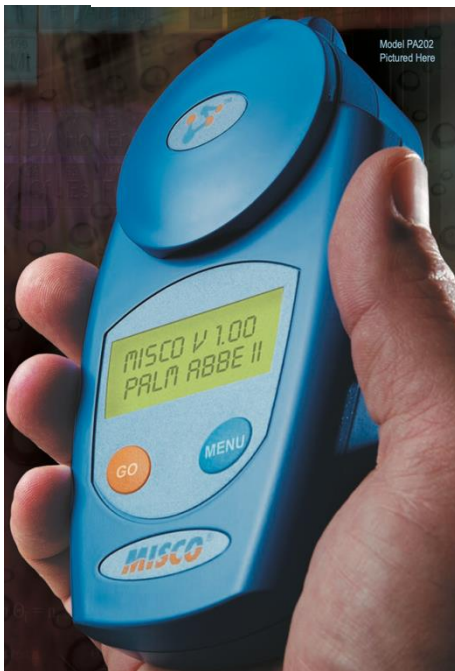
**Place a drop or two in the sample well.**



**Close the sample cover and allow the temperature to equalize.**



**Press and release the <GO> or <READ> button on the keypad**



A strong plastic enclosure is sealed to guard against liquid and dust penetration, while an integrated prism cover helps prevent sample evaporation and protects the sapphire measuring surface from possible damage. The cover also shields the optics from the influence of strong ambient light, making the Palm Abbe ideal for use indoors or in direct sunlight.

### Auto Calibration

Calibration is automatic and does not require the use of special calibration solutions or tools. The Palm Abbe refractometer automatically calibrates itself to water and is ready to use in seconds. No more screws to turn and nothing to adjust.



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## PEAK KIT Dimensions ....

### PEAK Case:

Peak Kit USMC: 1 Case Weight: 100lbs  
Peak Kit U.S. Army: 2 Cases,  
Case 1 Weight: 33.6lbs  
Case 2 Weight: 26lbs

Dimensions: 37.3in x 21.0in x 17.2in  
Dimensions: 17.5in x 16.1in x 12in  
Dimensions: 17.5in x 16.1in x 12in

### PEAK Battery Pack:

24 VDC Battery Pack 10 AMPHr  
Weight: 3.25lbs

Dimensions: 4.5in x 2.7in x 5in

## PEAK KIT has Passed the Following Tests ....

- Passed MIL-STD-810, Method 516, Procedure IV (Shock)
- Passed MIL-STD-810, Method 514, Procedure I (Vibration)
- Passed MIL-STD-810, Method 512 - Immersion, Procedure I (Immersion)
- Passed MIL-STD-810, Method 502, Low temperature, Procedure II (Operational Low Temperature)
- Passed MIL-STD-810, Method 501, High temperature, Procedure II (Operational High Temperature)
- Passed MIL-STD-810, Method 502, Procedure I (Storage Low Temperature)
- Passed MIL-STD-810, Method 501, Procedure I (Storage High Temperature)

Full PEAK KIT	Description	Certifications
JF-1A-ST	Standard Handheld Stick Conductivity Meter 0-2,000 pS/m	ASTM D2624
JF-WA1	Hydro-Light Digital Free Water Detector	ASTM D3240
Density Meter (Made in Austria)	Digital Portable Density Meter	ASTM D7777
FSII Meter	Measurement of Fuel System Icing Inhibitors FSII Meter	ASTM D5006
Particle Counter	Particle Counter (ASTM D7619 Equivalent)	ASTM D7619
CCCFP (Made in Austria)	Flash Point by Continuously Closed Cup Flash Point	ASTM D6450



## Proudly Made in America

All D-2 Inc. Products are made right here in the USA. We offer direct support for our products.