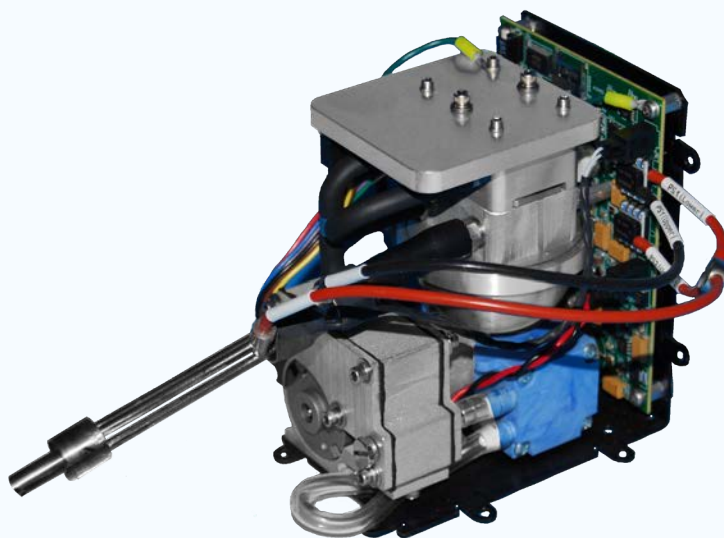


Trusted solutions
for cloud and aerosol measurements

STAP Single-channel Tricolor Absorption Photometer

Model 9406

Measure black carbon mass & aerosol light absorption
in a very compact package.



Features:

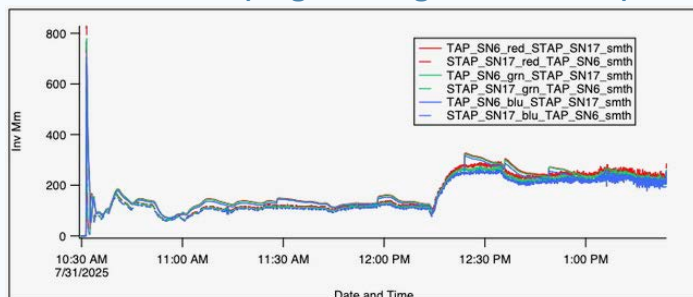
- Three wavelengths (red, green, blue)
- Extremely sensitive (noise level 20 ng/m³)
- Portable, lightweight, low power use
- Self-contained with on-board data storage
- No external pump required
- Field tested on unmanned aerial vehicles (UAVs)

BRECHTEL

Brechtel Manufacturing, Inc.
1789 Addison Way
Hayward, CA 94544
510-732-9723
sales@brechtel.com

Dedicated to furthering scientific discovery

STAP and TAP sampling same nigrosin aerosol input.



Specifications

Parameter	Value
Wavelengths	450, 525, 624 nm
Sample flow	0.5 to 1.7 lpm
Vacuum Requirement	None
Noise level (1 sigma)	$\pm 0.2 \text{ Mm}^{-1}$ ($0.02 \mu\text{g m}^{-3}$ black carbon)
Filter	Glass fiber, 10 mm dia
Number of Sample Spots	1
Number of Reference Spots	1
Communications	USB and RS-232
Operating Temperature	-20 to 35 °C
Operating Pressure	200-1,100 mb
Operating Humidity	0-95% RH non-condensing
Physical Size	5.3 x 4.3 x 3.9 in/ 13.5x10.9x9.9 cm
Weight	1.45 lbs/0.66 kg
Supply voltage	12 VDC (9-16 VDC)
Power usage	10 watts
Mounting	Multiple hard mounting points through metal body brackets

*Sample flow must be dried to RH < 40%

Applications

- Mobile platform sampling: UAVs, Balloons, Kites, Aircraft, Vehicles
- Black carbon monitoring
- Personal exposure monitoring
- Climate change field studies
- Air quality monitoring

How to Order

Part No.	Description
9406	Single-Channel Tricolor Absorption Photometer
9400	ACCESS Base Module (ruggedized mini-PC with small LCD, keyboard & UAV Reader software)
STAP-FIL250-AZ	10mm filters for 9406 STAP (Azumi filter material), Package of 250
ACC-STAPKit	Maintenance kit for 9406 STAP
ACC-PC	Laptop computer pre-loaded with UAV Reader software
ACC-PWR	External 12VDC power supply for ground operation of any 94XX series instrument
ACC-Dryer	Sample Flow Dryer (desiccant and pump not included)
8008	Particle Round Jet Impactor (0.5 μm cut size, 0.7 lpm flow)
8009	Particle Round Jet Impactor (1.0 μm cut size, 0.7 lpm flow)
ACC-UAV-Reader	UAV Reader Software Installation Package on USB Drive
ACC-UAV-Inlet	Isokinetic inlet for UAVs and other mobile platforms

Publications:

Patricia K. Quinn, Timothy S. Bates, Derek J. Coffman, James E. Johnson, and Lucia M. Upchurch, (2024). Use of an Uncrewed Aerial System to Investigate Aerosol Direct and Indirect Radiative Forcing Effects in the Marine Atmosphere. EGU sphere, <https://doi.org/10.5194/egusphere-2023-3128>.

Roman Pohorsky, Andrea Baccarini, Julie Tolu, Lenny H. E. Winkel, and Julia Schmale (2024). Modular Multiplatform Compatible Air Measurement System (MoMuCAMS): a new modular platform for boundary layer aerosol and trace gas vertical measurements in extreme environments. Atmos. Meas. Tech., 17, 731-754, <https://doi.org/10.5194/amt-17-731-2024>.



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Email us at sales@brechtel.com

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*Some products may be shown with optional accessories, which are sold separately. Items shown may not be to scale.