

# BRECHTEL

Brechtel Manufacturing, Inc.

Response to RFQ

The sampler of particles into liquid

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## Prospect

<b>Name</b>	Institute of Chemical Process Fundamentals of the CAS, v.v.i.
<b>Administrator</b>	Ing. Miroslav Puncochar, CSc., DSc., director
<b>Project name</b>	Sampler of particles into liquid
<b>Period of Performance</b>	Date of Award - TBD
<b>Quote Presented</b>	2020-0728B, dated July 28, 2020

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## Statement of work

### Scope of Work

One key piece of research equipment for ambient air quality observations is the Particle-into-Liquid Sampler (PILS, Brechtel Model 4001) and related accessories and software. The PILS allows rapid, semi-continuous aerosol chemical composition measurements by collecting ambient particle into water and delivering liquid sample to either on-line analysis systems or to a vial-filling Fraction Collector (Auto-collector). The PILS software developed by Brechtel provides a simple user interface to record the operating temperatures of the unit.

### Points of Contact

### Technical Specifications

The sampler will allow / fulfill / contain at a minimum the following capabilities consistent with Annex 1 of the tender:

- sampling of aerosol particles will take place by condensation of water vapor on the particles with subsequent impaction of the resulting drops
- there are greater than two studies comparing the results from the sampler with other methods in the professional literature published in peer-reviewed and impacted journals

- the sampler will be fully integrated in a single box suitable for installation in a standard 19-inch rack
- the accessories or the sampler itself will contain the following functional units:
  - automatic aerosol liquid fraction collector with a vial-holding carousel for at least 35 vials with a volume of at least 10 ml allowing at least 8 days of non-intervention operation
  - uses vials that are closed both before and after sample filling
  - Denuder for organic, acid and basic gases (functional simultaneously for all listed components)
  - control software ensuring recording of all critical temperatures for later quality control of the sampling process
  - external vacuum pump (230 V)
  - equipment maintenance kit

**Product Deliverables**

<i>Item description</i>	<i>Delivery schedule (Days, weeks, months)</i>	
Model 4001, PILS		
Model PILS-Kit, Maintenance kit for 4001 PILS		
Model PILS-P230, External vacuum pump for 4001 PILS		
Model DE, Denuder package for 4001 PILS		
Model PILS-AC, Auto-collector with 38 vial holding carousel		
Shipping: FOB Destination, within 3 months ARO		
Warranty, first year hardware warranty including parts and labor		
Support, first year telephone & e-mail support on Instrument and Software		

**Training and Installation Options**

<i>Item description</i>	<i>Delivery schedule (Days, weeks, months)</i>	<i>Cost</i>
Host up to 3 instrument operators for 6 hour on-line video conference to train on PILS installation and operation		

**Payment terms**

**Shipping terms**

50% at receipt of order, balance within 30 days of receipt	
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