

# ENVIRONMENTAL EXPRESS

## AutoBlock™ Frequently Asked Questions

**“The AutoBlock adds reagents & heats & cools all in a HEPA filtered environment”**

**“It’s like having another analyst in the lab”**

**“Just start it up and can leave to go home and feed the kids”**

### How does the system work?

The AutoBlock is a hands-free metals digestion system that is completely automated and self-contained (no hood required).

### Features:

- Digests up to 54 samples and 3 different methods simultaneously
- Hands free digestion – reagents pumped directly from the bottle into the samples
- No fume hood is necessary – completely enclosed system with HEPA filtered environment
- Pre-programmed with 7 EPA methods & methods can be created and customized
- Operated by color touch screen controller and runs on Windows XP with built in computer
- Data can be directly downloaded with a USB memory stick & uploaded on any PC
- Date, time, & sample temperature automatically recorded throughout the digestion
- Self-cleaning system with automatic purge of reagent after every step

### What does the AutoBlock include?

AutoBlock™ 5 Reagent 54-Well System: Catalog # AB1001 for \$31,000

- Includes: 1 AutoBlock manual, 1 AutoBlock unit, 1 AutoBlock electrical unit, 1 power cord, 3 racks, 6 ½” ID drain tubes, 1 10L carboy, 1 ½” barb fitting, 5 flangeless nuts, 5 (+2 extra) flangeless ferrules, 25 1/16 ID reagent tubing

AutoBlock™ 10 Reagent 54-Well System: Catalog # AB1002 for \$34,000

- Includes: 1 AutoBlock manual, 1 AutoBlock unit, 1 AutoBlock electrical unit, 1 power cord, 3 racks, 6 ½” ID drain tubes, 1 10L carboy, 1 ½” barb fitting, 10 flangeless nuts, 10 (+2 extra) flangeless ferrules, 50 1/16 ID reagent tubing

### Do I need the 5 reagent or the 10 reagent system?

The 5 Reagent AutoBlock System is perfect for running tests with up to 5 different reagents, including DI water. The 10 Reagent AutoBlock System is perfect for using a greater variety of reagents and if wanting to specify one side for a particular method, such as reducing contamination when testing for Mercury.

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### What is the basic procedure?

With the Environmental Express AutoBlock, metals digestions are completely automated.

1. AutoBlock is turned on and the program set to run (7 pre-programmed EPA Methods)
2. AutoBlock pumps reagents directly from reagent bottles (concentrated acids do not have to be diluted)
3. The AutoBlock is self-cleaning between reagents. Rinses tubing with DI water between each step.
4. The dispensing arms move over the programmed samples and delivers reagents
5. The block heats to programmed temperature
6. The procedure continues to run independently as programmed (no babysitting required)
7. When the digestion is complete, the samples are automatically raised to cool
8. The block returns to room temperature
9. The samples are then ready for analysis
10. The data is continuously logged through the procedure and can be exported to a PC via the USB port on the front of the AutoBlock

### What EPA Methods are pre-installed on the AutoBlock?

EPA Methods 200.2, 200.7, 3050B, and 200.8 are programmed. Mercury methods 7470A, 7471, and 245.1 are also pre-installed on the AutoBlock.

### Do I need to put it in a fume hood?

No, the AutoBlock is a self-contained HEPA-filtered system. It has a computer controlled blower system connected to a 4" port that must be connected to the outside or into a fume hood.

### What about corrosion and contamination?

The AutoBlock is manufactured with Kydex ABS plastic to ensure that it will not corrode. It uses the proven HotBlock technology to heat samples and there are no metal parts. The tubing is specifically designed to handle the high pH of concentrated acids. There are 4 Vici emitters in the Auto Block that emit a gas that coats exposed metal parts with an anti corrosive. The AutoBlock also continuously self-cleans after each reagent addition by flushing the entire fluid delivery system with DI water.

### Can I run multiple digestions simultaneously?

Yes, the AutoBlock can run 3 digestion methods at the same time. As long as they are at the same temperature and utilize the available reagent choices.

### How do I know what is going on or what happened while I was out?

The data logger records the date, time, temperature, and process step every 15 minutes. It will also record if there is an interruption or malfunction. This data can also be transferred to a USB flash drive and uploaded onto a PC for convenient data manipulation with a .txt file.

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### What about the safety of the system?

As a safety feature, the unit automatically shuts down if there is a leak in the pump housing, a voltage malfunction, or if the vent fan fails. There is also an emergency stop button on the top of the unit. The enclosure circulates HEPA filtered air through the Auto Block.

### Can this unit be used for both water and soil samples?

Yes, the AutoBlock can be used for many applications. The unit comes pre-installed with the following EPA Methods: 200.2, 200.7, 200.8, 3050B, 7470A, 7471, and 245.1. Also, any new program can be design and/or modified to the exact specifications needed by the laboratory.

### How often does it need to be calibrated?

The AutoBlock requires an initial calibration of temperature and volume. Always use a volume of 30mL for calibration. The temperature should be calibrated annually and the volume approximately every 3 months, depending on use.

### How will I know if something needs to be replaced?

The AutoBlock screen will display a message to let the user know which parts need replacement, along with the part numbers and ordering information. The HEPA filter should be replaced approximately every 6 months. The pump tubing and Vici emitters should be replaced annually. These dates can also be tailored and modified to the laboratories needs.

### What is the warranty of the system?

The Environmental Express AutoBlock is warranted to heat, hold temperature, automatically add reagents, lift sample racks, cool samples with air flow and perform the stated functions for a period of one year from date of shipment. If the system fails to adequately perform specified laboratory digestions under normal laboratory use, then the item is fully covered for by the 1-year warranty.