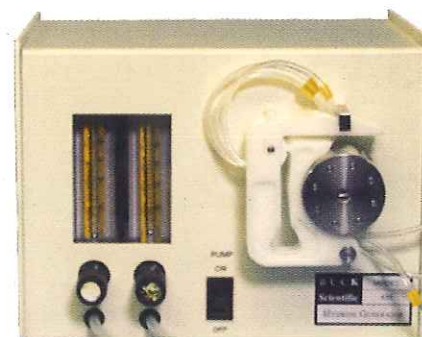


# Atomic Absorption Hydride Systems

## 420 Continuous Flow Hydride Generator

The Model 420 is an easily adaptable accessory for flame AA spectrophotometers that allows PPT detectability for As, Se, Sb, Sn, Te, Bi, and Ge using standard hydride generation procedures. Using inert Polymer components and a reliable pumping system, users can quickly switch between flame and hydride.



### Features:

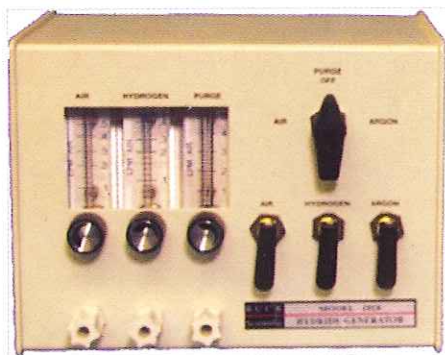
- Allows superior Detection limits for hydride metals compared to graphite furnace AAS, typically in the 100-500 PPT.
- Does not require hydrogen gas.
- Easy Installation and removal for changing back to flame operation.
- Four order of magnitude dynamic range using the Buck model 210/211 system for highest accuracy over a wide range of sample concentrations minimizing dilutions and errors.
- Inert Tubing gives rapid equilibration time allowing typical throughputs of 50 samples per hour with reproducibilities of better than 2% at the 500 PPT level

### Example for detection limits for the Buck Model 420 Hydride System

Element	Wavelength (ABS)	Minimum. D.L.	Typical RSD at 10 PPB
Arsenic (As)	193.7 nm	0.15 PPB	1.5%
Bismuth (Bi)	223.1 nm	0.25 PPB	2.1%
Antimony (Sb)	206.8nm	0.20 PPB	1.8%
Selenium (Se)	196.0nm	0.35 PPB	2.6%
Tin (Sn)	286.3nm	1.0 PPB	8.5%
Tellurium (Te)	214.3nm	0.30 PPB	3.1%

Results Based on data from optimized model 210VGP

## 1018 Combination Batch Cold Vapor & Hydride Generator



### Overview:

Using the classic chemistry defined by the "Marsh Test" for Arsenic and other hydride forming metals, and the Hatch and Ott cold vapor reaction specifically for Mercury. The model 1018 batch mode attachment for flame atomic absorption system allows low PPB and high PPT sensitivities for these elements, respectively.

### Features:

- Cold vapor method employs a simple acid matrix for the sample and uses Stannous Chloride for the reducing reaction to generate PPT level data for Mercury
- Simplified installation to existing flame AAS and predefined reaction chemistry allows an easy start up for rapid operation.
- Uses argon or Nitrogen for carrier gas, no need for Hydrogen for most applications.
- Hydride generation technique commonly used for As, Sb, Se and occasionally for Sn, Bi, Te and Ge; uses common acids and sodium borohydride reducing agent for low PPB detection limits in prepared samples.
- Meets the requirements for EPA standard methods 245.1, SW-846 and the 200 series potable water tests.
- Compact size allows unit to be placed conveniently next to AA systems.
- Readily available reaction flasks provide convenient sample prep and analysis in one vessel for high throughput work.
- Quartz absorption cells easily fit over burner head on Buck 210/211 AA systems using included bracket for both hydride and cold vapor operation.