

# ART Formulation Lab Services Equipment and Capabilities

## Formulation testing capabilities

### **FLOVITRO™ Dissolution Testing** Rohm and Haas patented dissolution testing technology

- Bio-relevant test conditions
- Unparalleled correlation with in vivo plasma profiles
- Same test method used for different dosage forms of the same API
- Predictive for ER formulations
- Accommodates all major dosage forms
- Rapid test method development

### **Buccal Dissolution Testing** Rohm and Haas patented test for evaluating taste-masking efficiency

- Bio-relevant test conditions
- Excellent agreement with human taste-panel testing
- Rapid test (~20 minutes per test)
- Rapid test method development
- Accommodates solutions, suspensions, and orally dissolving tablets

## Formulation capabilities

### **VFC Lab Micro**

- Fluid bed drying of whole beads and powders
- Top Spray Coating
- Bottom Spray (Wurster) Coating
- Granulation
- Capacity: ~ 600 g per batch

### **Retsch 2000 Grinder**

- Impact mill
- 6,000 - 18,000rpm
- Capability d(0.5) ~ 40 microns
- Continuous operation/vibratory feeder
- Capacity: 1000ml per batch

### **20 L Reactor System**

- All glass 20L reactor
- Jacketed
- 40 cm filter

### **Buchi B-290 Mini Spray Dyer**

- Closed loop operation
- Inlet air conditions
- Evaporative capacity: 1.0 L/h water
- Max airflow: 35 m<sup>3</sup>/h
- Max inlet temperature: 220°C

### **Tablet Making**

- High and Low shear granulators

### **TDP-5 single punch tablet press:**

- Tablet diam: 3mm - 20mm
- Rate: 5500/h
- Max pressure: 1125lbs

### **Disintegration Tester**

- Measure the disintegration rate of tablets.

### **Powder Flow Characterization**

- Standard funnels: 9 mm, 14 mm, 24 mm
- Stable Microsystems TX2 with Powder Flow Module: caking, flowability, cohesiveness



# Spring House ART Formulation Lab Services Equipment and Capabilities

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## Analytical Capabilities

- Spectronic Genesys 2 uv/vis spectrometer
- Denver Instruments IR60 Moisture balance
- Agilent 1200 Series HPLC

## Percival RX3000 Incubator

- Humidification and dehumidification
- Temperature range: 2°C to 44°C ±0.5°C
- Humidification range:  
50% to 85% ± 5% over 15°C to 30°C  
85% ± 5% over 30°C

## General analytical capabilities

In addition to the Formulation Lab we also have access to the following analytical techniques through Analytical Research at Spring House:

### Spectroscopy

- UV
- IR - including photo-acoustic, and microspectrophotometry
- Raman
- NMR - including solid state, and all major NMR nuclei
- ICP-AES
- AA
- XRF
- XRD
- ESCA

## Mass Spectrometry

- MALDI-TOF
- High Resolution
- GC-MS
- LC-MS

## Microscopy

- Optical
- TEM
- SEM
- AFM

## Chromatography

- HPLC
- GC
- GPC
- IC

## Thermal Analysis

- DSC
- TGA

## Particle size

- Laser Diffraction

For more information about our Formulation Lab Services, visit our website at [www.theartofformulation.com](http://www.theartofformulation.com)



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