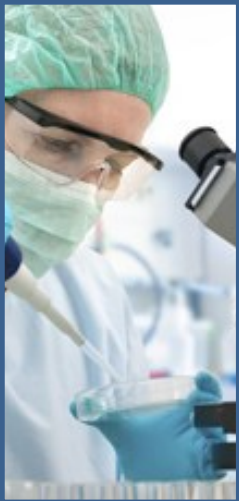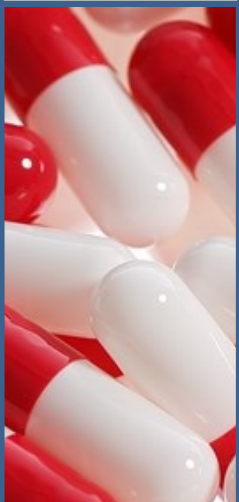# *Pharma*RAM™ II

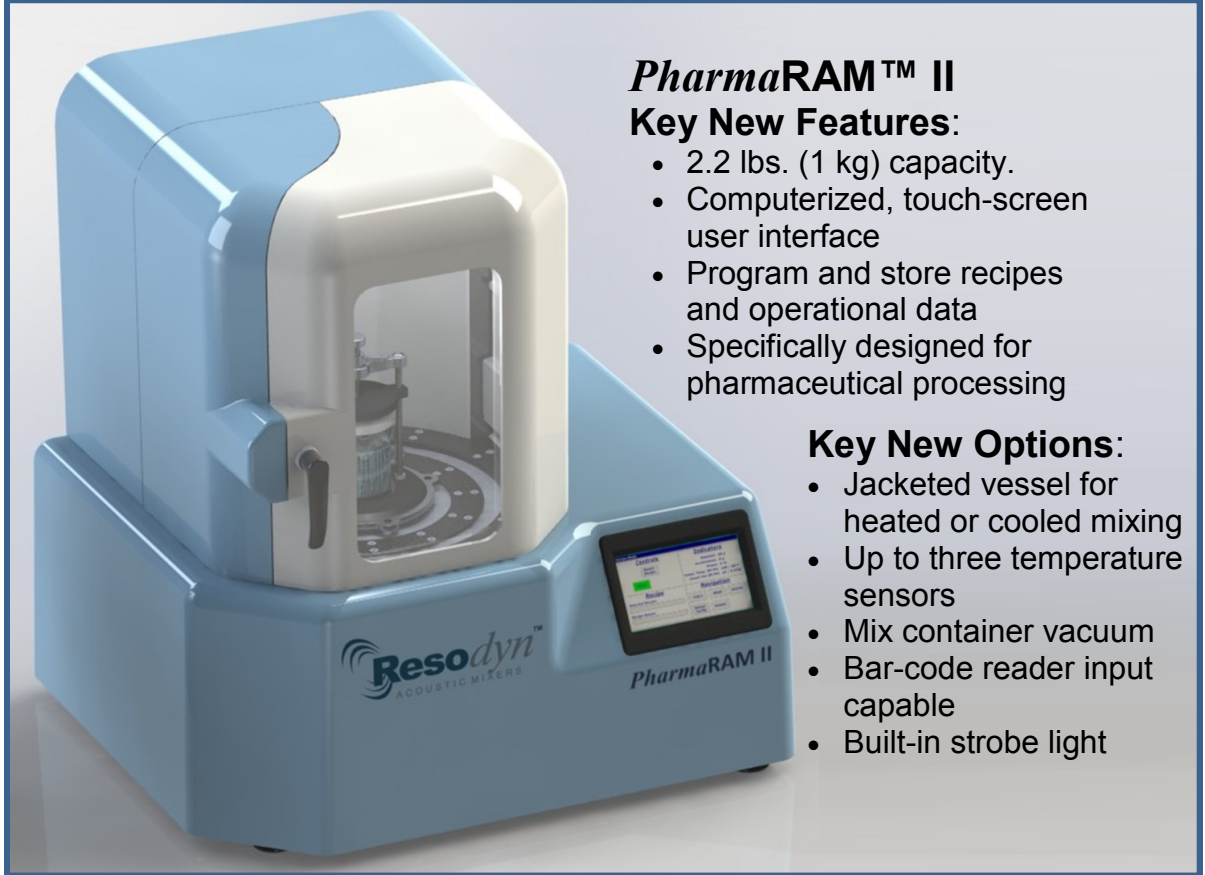**change** the way you think about formulating pharmaceuticals

**Formulations**

**Topicals**

**Capsules**

*PharmaRAM™ II*
**Key New Features**:

- 2.2 lbs. (1 kg) capacity.
- Computerized, touch-screen user interface
- Program and store recipes and operational data
- Specifically designed for pharmaceutical processing

**Key New Options**:

- Jacketed vessel for heated or cooled mixing
- Up to three temperature sensors
- Mix container vacuum
- Bar-code reader input capable
- Built-in strobe light

## Innovative Second Generation Technology

Designed for improved mixing that is faster, cleaner, and safer, the *Pharma*RAM™ II introduces significant benefits of *ResonantAcoustic® Mixing* (RAM) technology at a 2.2 lbs. (1 kg) scale. Pharmaceutical formulations and compounded medicines processing can achieve higher quality and lower cost. The *Pharma*RAM™ II is well suited for mixing of liquids and powders, as well as pastes, creams, and ointments.

## Exceptional RSD Results

Since being introduced in 2007, RAM mixers have become the processing technology of choice at many developmental, formulating, and production facilities. A primary reason is RAM's ability to consistently achieve less than 4%, even less than 2%, relative standard deviation (RSD) across a wide range of excipients and API combinations. *(Please see the RSD Mix Test Results chart on reverse side.)*

The advanced design features incorporated into the *Pharma*RAM™ II reflect design and operational considerations from many *ResonantAcoustic® Mixing* users in compounding and pharmaceutical communities.

*Pharma*RAM™ II utilizes low-frequency, high-intensity acoustic energy to rapidly fluidize and disperse material. *Pharma*RAM™ II is a non-contact mixing technology; completely and uniformly mixing without the use of impellers, blades, or wands.

# Reso*dyn*
A C O U S T I C   M I X E R S

**130 North Main Street, Suite 630**
**Butte, MT USA 59701  (406) 497-5333**
**info@ResodynMixers.com**
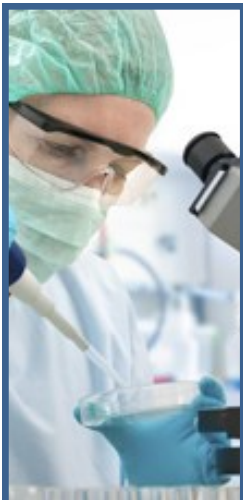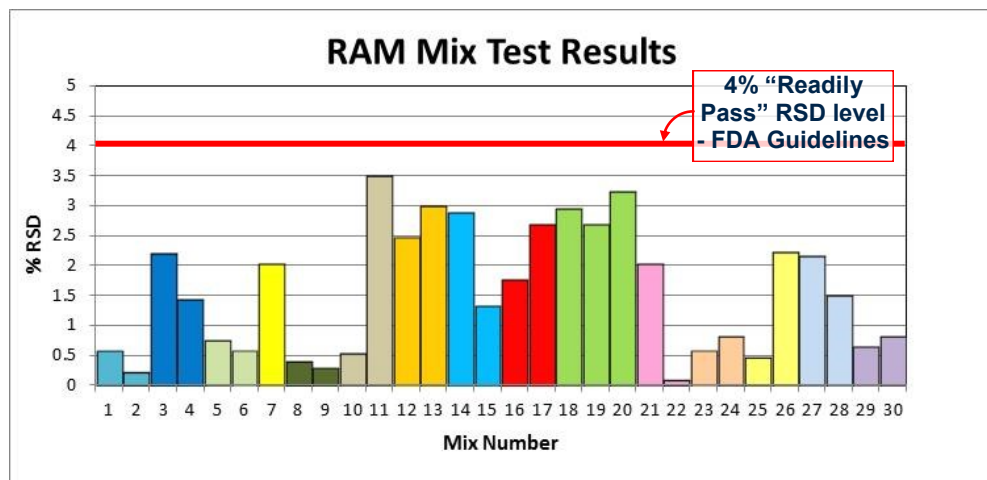**www.ResodynMixers.com**
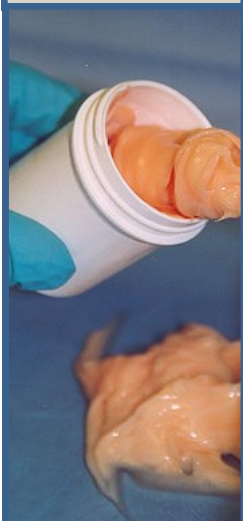
# *Pharma*RAM™ II

**change** the way you think about formulating pharmaceuticals

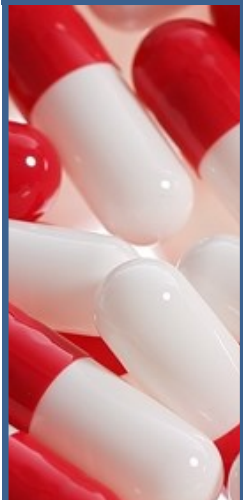**ResonantAcoustic® Mixing delivers exceptional, highly repeatable RSD results**

**30 common API/excipient mixes tested achieved <4% RSD requirement in under 2 minutes of mixing time**

## RAM Mix Test Results

4% "Readily Pass" RSD level - FDA Guidelines

%RSD vs Mix Number



**Formulations**

**Topicals**

**Capsules**

## Benefits

- Eliminate manual mixing variability
- Programmed operation for repeatable results
- Superior potency through content uniformity
- Rapid mixing reduces processing time
- Sealed mixing vessel enhances safety
- Automatic operation reduces repetitive motion
- No cross contamination with single use vessel
- Easy to use, menu-based program control
- Vacuum option degasses, virtually eliminating air entrainment

## Specifications

- Mix Weight up to 2.2 pounds (1 kg)
- Mix Volume up to 34 fl. oz. (1 L)
- Up to 100 *g* acceleration (981 m/sec$^2$)
- Computerized, touch-screen user interface
- Mixer Weight: 260 pounds (118 kg)
- Mixer Size (inch/cm): 32" (82 cm) W, 30" (76 cm) D 33" ( 83.8 cm) H
- Bar-code reader input capable
- 110/220 VAC, 50/60 Hz
- CE Certified

## Reso*dyn*
ACOUSTIC MIXERS

**Processing Technology of Choice for Drug Development, Compounding, and Manufacturing**

**130 North Main Street, Suite 630
Butte, MT USA 59701 (406) 497-5333
info@ResodynMixers.com www.ResodynMixers.com**

**Other products include:
PharmaRAM II GMP Mixer,

RAM 5 and RAM 55
Production Mixers**