

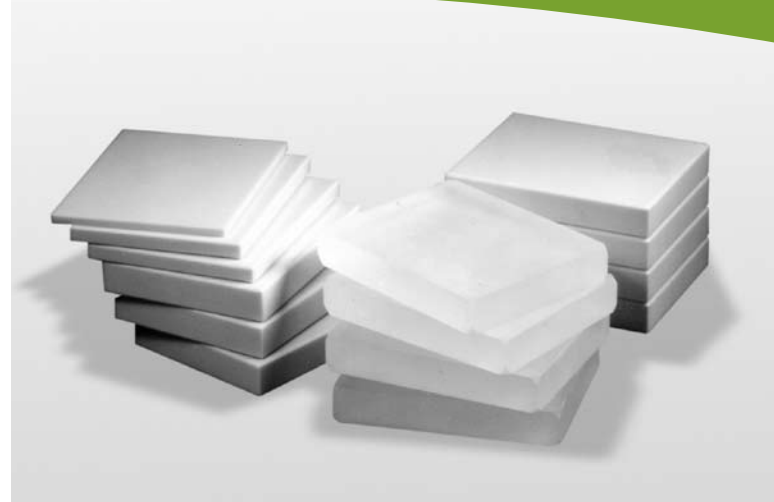
Mammo Phototimer Consistency Test Tools

A mammographic unit's Automatic Exposure Control should be capable of maintaining optical density within ± 0.15 OD as the voltage is varied from 25 to 35 kVp, and as breast thickness is varied from 2 to 8 cm for each technique. Test images taken of uniform phantoms of varying thicknesses should not differ by more than ± 0.30 OD from each other. These tests should be carried out over the kVp range customarily used by the mammography center. The phototimer consistency test tools are available in two materials: acrylic, and, for more accurate results, breast tissue-equivalent BR-12 material*.

*BR-12 is a designation (D.R. White, et al.) of certain epoxy resin formulations that react to x-rays in the mammographic energy range (15-30 keV) in the same manner as the human tissue. The tissue-simulation properties for these slabs are maximized at 20 keV (28kVp \pm). The glandular equivalency of this material is 45% in the mammographic range.

Acrylic (PMMA)

- ▶ **Model 18-203**
Consists of four 10 x 12.5 cm slabs, 2 cm thick to produce thicknesses of 2, 4, 6, and 8 cm
Weight: 2.6 lb (1.2 kg)
- ▶ **Model 18-224**
One acrylic sheet, 18 x 24 cm, 2 cm thick
Weight: 2.3 lb (1 kg)
- ▶ **Model 18-300**
One acrylic sheet, 24 x 30 cm, 2.54 cm thick
Weight: 4.8 lb (2.2 kg)
- ▶ **Model 159A**
Consists of two 14 x 14 cm slabs 1.9 cm thick, two slabs 0.95 cm thick, and two slabs 0.48 cm thick. These slabs may be combined to produce a great variety of thicknesses from 0.48 cm to 6.6 cm.
Weight: 3.4 lb (1.6 kg)



Features:

- ▶ Available in either acrylic or tissue-equivalent BR-12 material*
- ▶ Should be used to test thickness tracking
- ▶ The American College of Radiology recommends this type of product in their Quality Assurance Program
- ▶ Meets MQSA Requirements

BR-12 Material

- ▶ **Model 18-204**
Consists of four 10 x 12.5 cm slabs, 2 cm thick to produce thicknesses of 2, 4, 5 and 8 cm
Weight: 2.2 lb (1 kg)
- ▶ **Model 18-225**
One BR-12 sheet, 18 x 24 cm, 2 cm thick
Weight: 1.9 lb (0.9 kg)
- ▶ **Model 18-238**
Research set, consists of six BR-12 10 x 12.5 cm sections including three 2 cm thick, two 1 cm thick and one 0.5 cm thick
Weight: 2.4 lb (1.1 kg)
- ▶ **Model 159-BR**
Consists of two 10 x 10 cm slabs 2 cm thick, two slabs 1cm thick, and two slabs 0.5 cm thick. These slabs may be combined to produce a great variety of thicknesses from 0.5 cm to 7 cm
Weight: 1.5 lb (0.7 kg)