Roto-Film□ Rotational Film Maker - Spin Coater

For making thin films from polymers that can be dissolved into solutions, the Roto-Film™ is an excellent alternative. Films are spin cast on a rapidly turning platen designed to hold standard aluminum weighing dishes, which are disposable. The edges of the weighing dish can be cut off to make a flat highly reflective surface that can be placed into a specular reflection accessory for analysis or the film can simply be peeled off the bottom of the weighing dish. Alternatively, films can be cast on a polished aluminum concave platen, on a Real Crystal® IR Card or on a KBr window. For most polymers, the film is complete within 60 seconds. If the film is cast on a KBr window, the window is simply mounted in a spectrophotometer for analysis. Films cast on polished platens are removed simply by contacting tape with the edge of the film and then pulling the film off of the platen.

The Roto-Film™ produces films which are extraordinarily consistent from film to film. The accessory employs a programmable positive feedback micro-processor controlled motion controller and a programmable timer to precisely reproduce cycle time, rotation speed and ramp up and ramp down from run to run.

Films cast by rotational casting on KBr windows, Real Crystal® IR Cards or which are analyzed by specular reflection are free of interference fringes. Rotational casting produces films with radial symmetry, which means that the film molecules radiate from a central point like spokes on a wheel rather than exhibiting the monodirectional orientation typical of extruded films. Extruded films will exhibit different absorbance peak intensities depending upon how the film is oriented when it is placed in a spectrophotometer, but radially symmetric films cast on the Roto-Film™ will exhibit the same peak intensities regardless of how the film is oriented when it is placed in the spectrophotometer. An anti-static block is recommended to aid in film removal.

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