

## Disappearing Glass Rod



**Purpose:** To demonstrate that when one transparent medium (glass rod) is immersed in another transparent medium of about the same refractive index (vegetable oil) the interface surface is rendered nearly invisible.

**Location:** room 146, shelf P2

Show students that the surface of the glass rod is plainly visible in the beaker when it has only air in it (left photo), but becomes nearly invisible when the vegetable oil is poured into the beaker (right photo). This is because light is mostly reflected from the surface of the rod when it's immersed in air, due to the mismatch of refractive index between air and glass. When the vegetable oil is introduced, this mismatch is greatly reduced and the surface of the glass rod reflects much less light, rendering it nearly invisible.