

ABSTRACT

A laminate for a blank mask includes a light-transmitting layer; a phase shift film disposed on the light-transmitting layer; and residual ions measured from a surface of the phase shift film through ion chromatography comprises at least one of sulfate ions in a concentration of 0 ng/cm² to 0.05 ng/cm², nitric oxide ions in a concentration of 0 ng/cm² to 0.5 ng/cm², or ammonium ions in a concentration of 0 ng/cm² to 5 ng/cm², or any combination thereof. A sum of concentrations of the residual ions is more than 0.

Fig. 2