

acoustic microscopy

Copolymer plastics

Figs. a and b show **Copolymer plastics**. High-pressure methods are normally used to print flexible materials, such as plastic foil, plastic bags, fabrics, cloths, etc. The printing plate are also flexible. They are made of the copolymers styrene and butadiene, for example, which polymerise when exposed to ultra-violet light, causing a change in stiffness (E module) of the material.

In the acoustic microscope, this E module change manifests itself as a change in grey levels, and can be observed immediately after UV exposure. Development of the printing plates - a process whereby the soft, unexposed areas are washed out - is unnecessary for assessment of structure formation with acoustic microscopes

Fig. a: Acoustic picture of a 1x1 mm² surface of a flexible printing plate. The bright circular structures are exposed, whereas the rest of the area is unexposed.

Acoustic frequency: 400 MHz
Image width corresponds to 1 mm

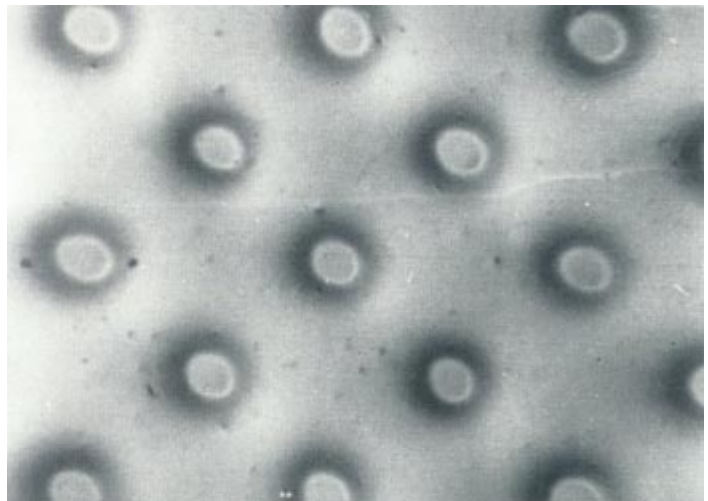


Fig. b: Acoustic picture of a 1x1 mm² surface of a flexible printing plate. The dark circular structures are unexposed, whereas the rest of the area is exposed.

Acoustic frequency: 400 MHz
Image width corresponds to 1 mm

