

Water grid

What patterns does the liquid form?



Press the disk down to spread out the blue fluid.

Pull up the disk with a black knob.

Observe how the fluid will change its appearance.

By pulling the disk you will create specific patterns with a dendritic structure. The fluid does not spread out over a closed area but only in individual water veins.

The resulting patterns are called fractals.

If you pull the disk, the air will not interpenetrate the fluid in one front but only in single areas. Therefore the fingers will form out.

The subtlety of the structures depends on the viscosity of the fluid. If you used very gooey oil instead of glycerine, the pattern would look like blobs.

In a pull-off test you can measure the force which is necessary to pull off the upper disk from the lower. By that you can determine the adhesion of a fluid – how strong a fluid sticks to a surface – e.g. a raindrop to a window.