

Determination of dentifrice extruding force



USE

Determination of the actuation force is needed to ensure the correct properties of the tube and a correct formulation for the toothpaste.



METHOD

The 3 points bend bench is used as a support for the tube. This way, the guillotine probe is able to mimic the human pressure on the tube. The tube is put under a 20cm compression (15cm for the « children » one) at 1mm/s.



EQUIPEMENT



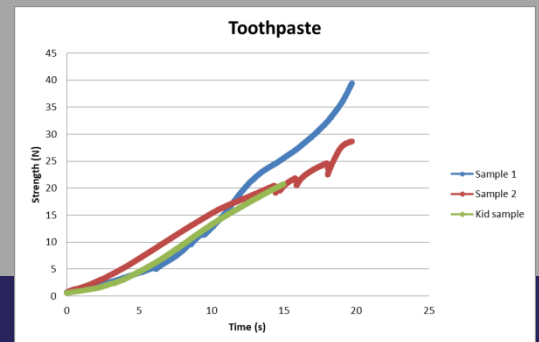
TX-700



3 points bend
fixture +
lipstick probe



Software
(optional)



RESULTS

Using either the computer software or the TX-700 integrated software, it is possible to determine the needed force to extrude the toothpaste from the tube.

During this test, three different toothpastes with similar conditioning are tested. Two are for « adults » and one « for children ». We can see that they show different properties. The higher the force, the harder it will be to get the toothpaste out. The device allows us to detect the presence of air bubble inside the tube (drop in the curve). The "children" toothpaste has a similar response compare to an « adults » one.

The TX-700 allows properties characterization of toothpaste tube towards pressure.

