4.2.2

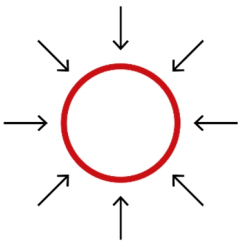
Mechanical and chemical transformation

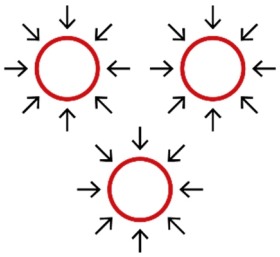
MECHANICAL AND CHEMICAL TRANSFORMATION OF FOOD

Back to the pebbles…

How can these pebbles get through the holes in the tube? The most obvious solution is to break them up into smaller pieces. This is the mechanical solution. However, there is a second option, a chemical solution. This involves dissolving the pebbles with something like acid. For this to work, the pebbles must be relatively small. Why? Because the acid needs a large surface to attack.

The acid cannot easily attack a large particle.





However, it will be much more effective on several small particles. So, in the end, both approaches are needed and it is optimal to use both mechanical and chemical digestion.

Teeth, for example, participate in the mechanical transformation of food, and the stomach's gastric juices contribute to the chemical transformation. For the chemical transformation to be more effective, teeth must do their part BEFORE the gastric juices come into play.

In DIGESTIX, both mechanical and chemical transformations are illustrated.