

**benedikt neyses**

lauri rautkari

akio yamamoto

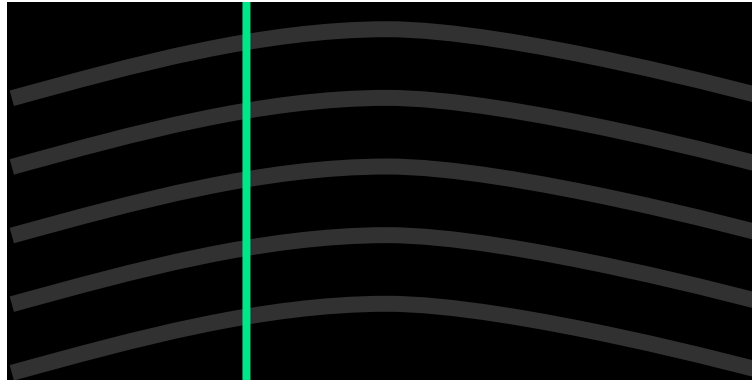
dick sandberg

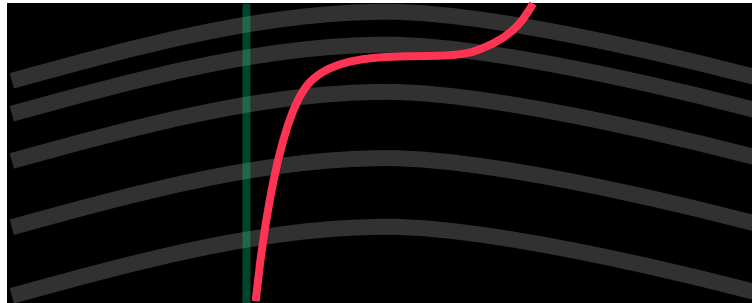
luleå university of technology ●

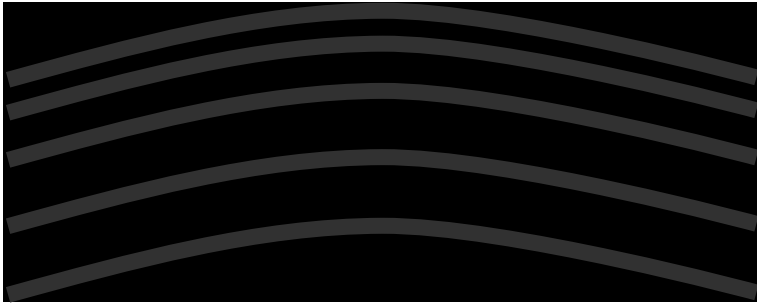
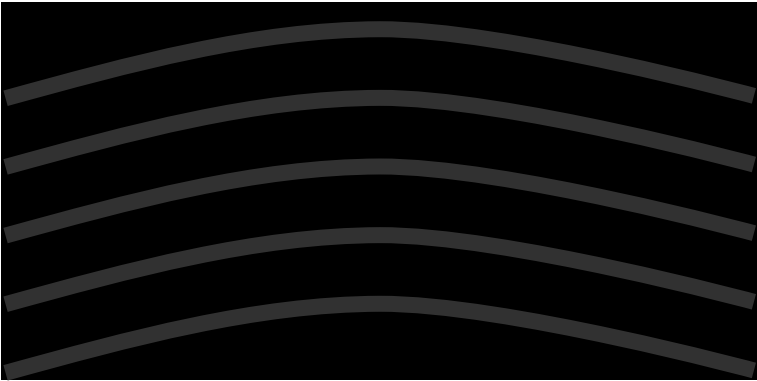
aalto university ●

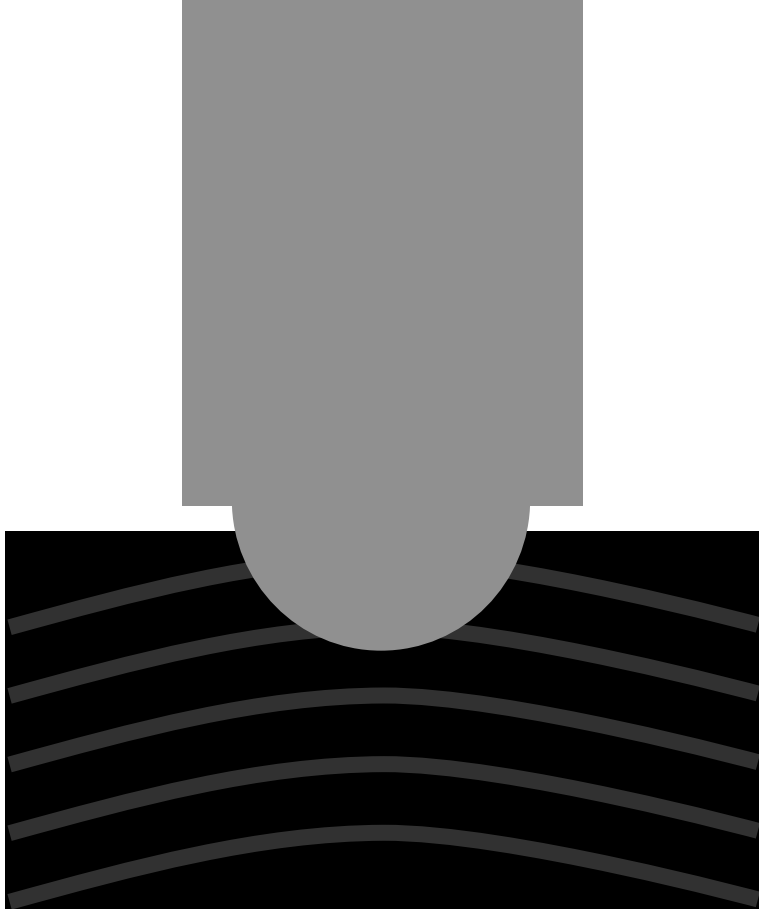


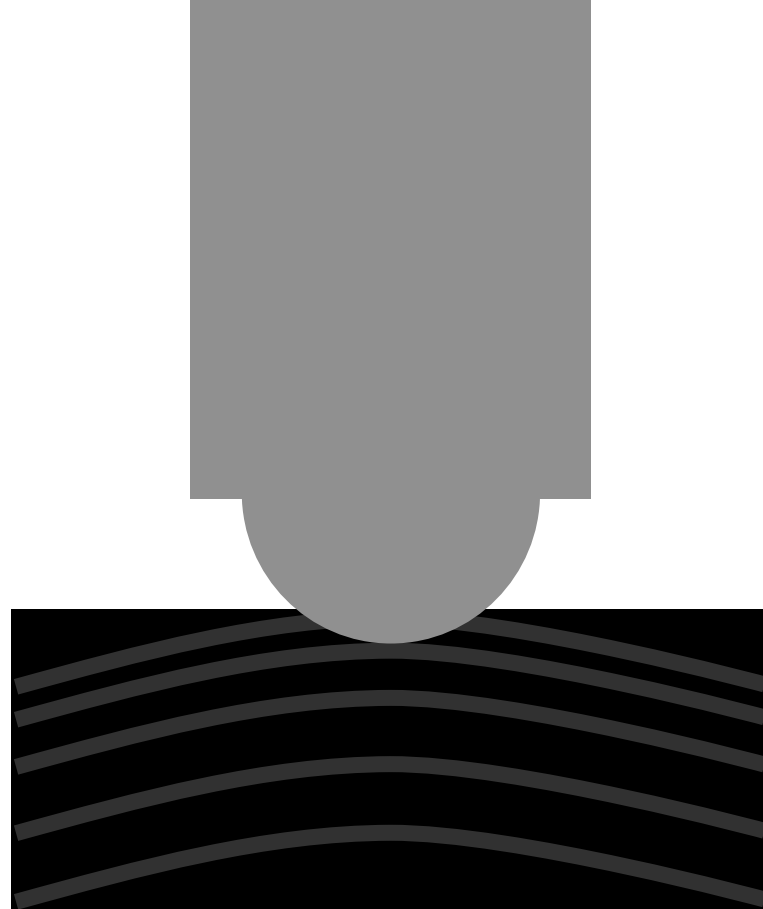
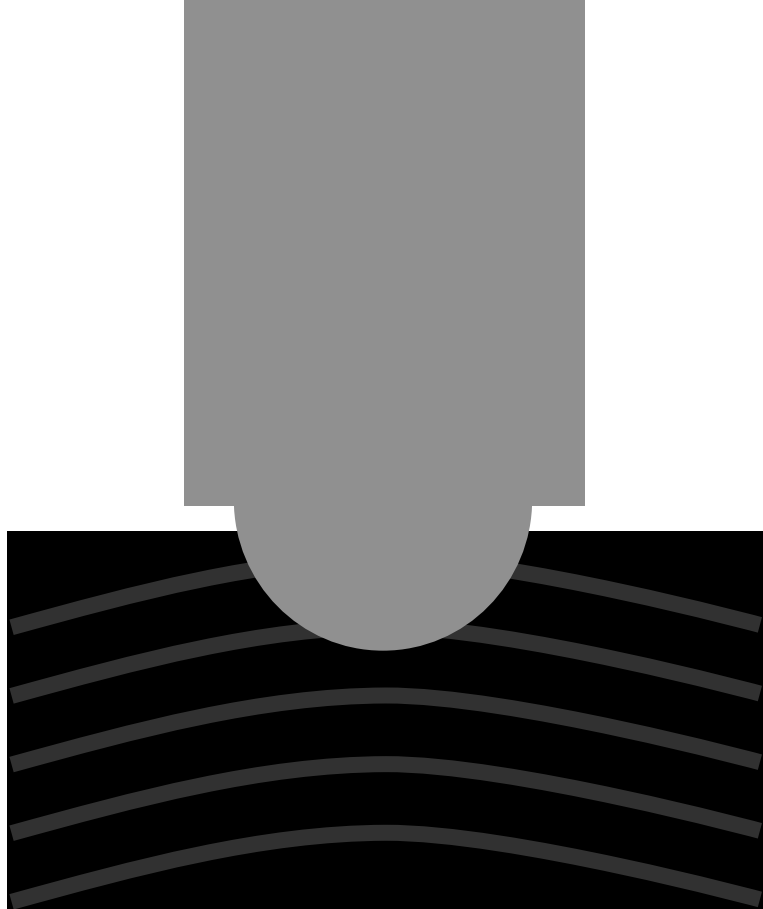
reduction of the set-recovery of surface-  
densified scots pine by pre-treatment with  
**sodium silicate** or **sodium hydroxide**

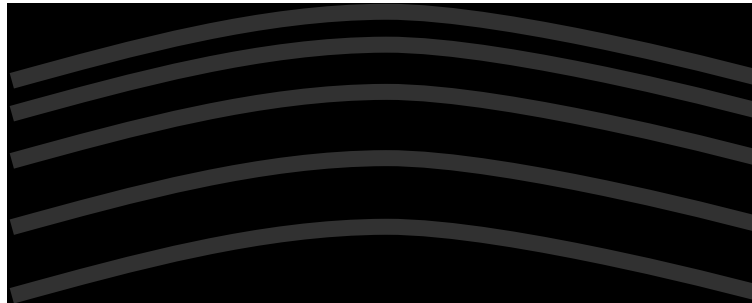




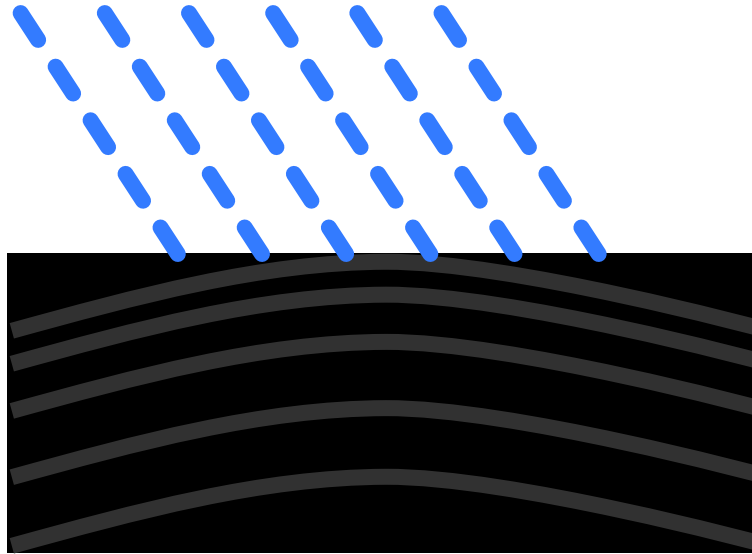


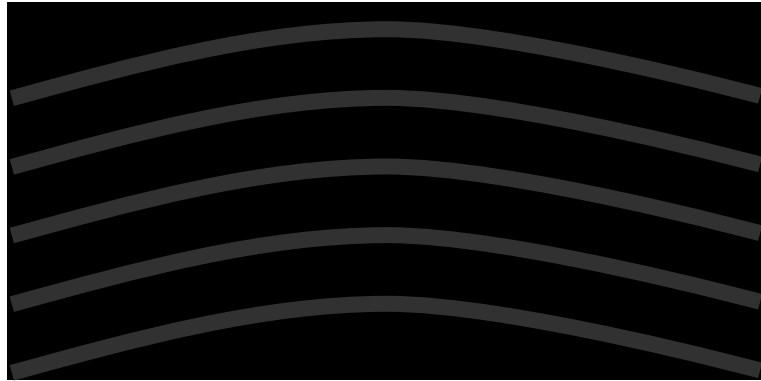






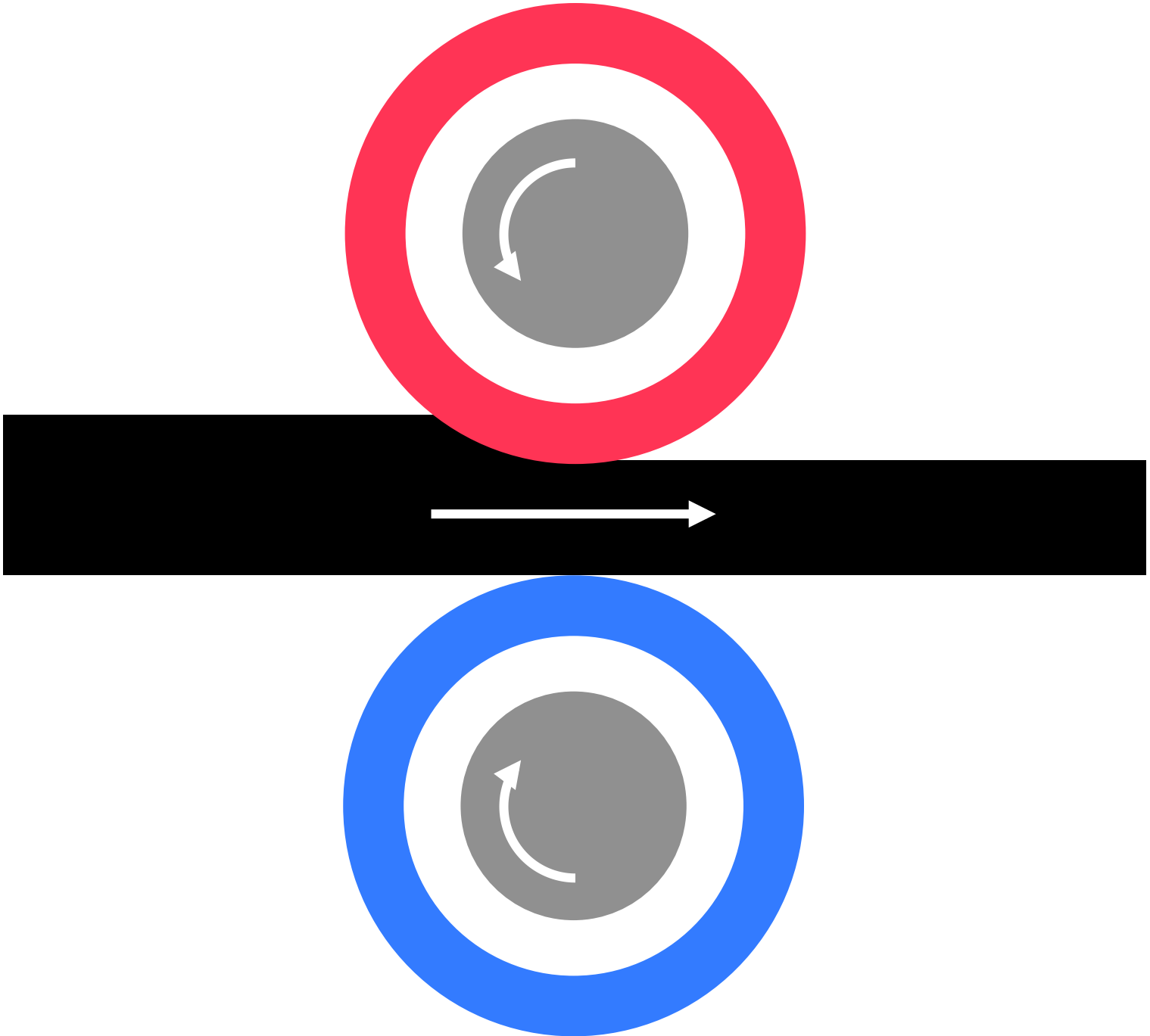




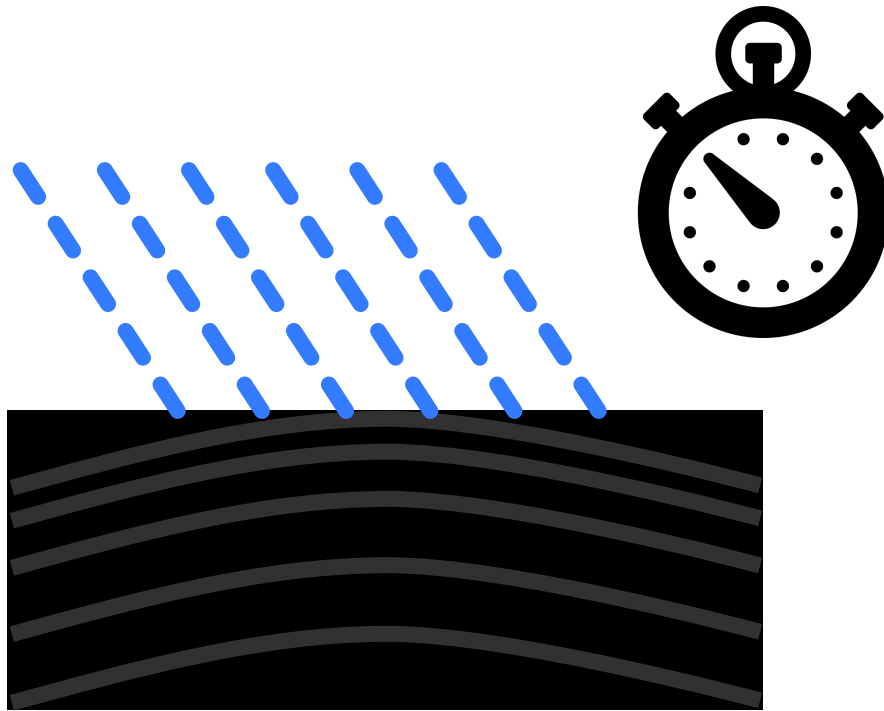








80 m/min



**sodium silicate**  
**sodium hydroxide**



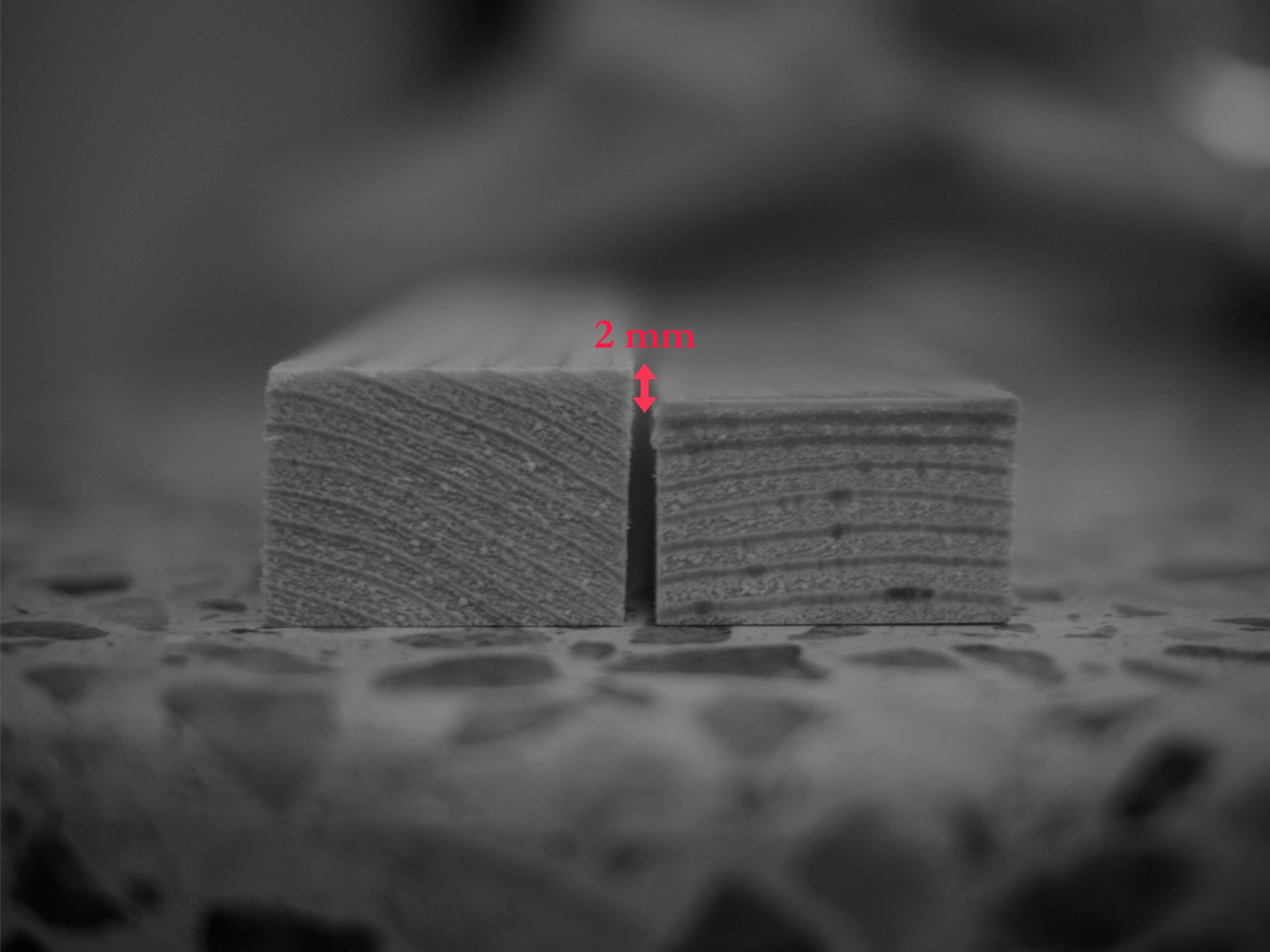




90 s

A black and white photograph of a stack of metal blocks. A red circle is drawn around the middle block, which has the text "30 + 60 s" written on it in red. The stack consists of several rectangular metal blocks of varying sizes, with a textured metal cap on top. The background is dark and out of focus.

**30 + 60 s**



2 mm





100%

80%

50%

20%

10%

Reference



Concentration

Surface - densified Scots pine  
pre-treated with sodium silicate solutions



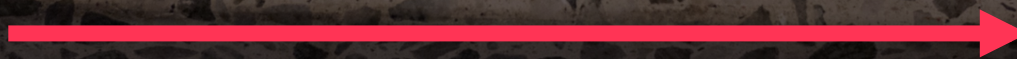
0.4 %



4.0 %



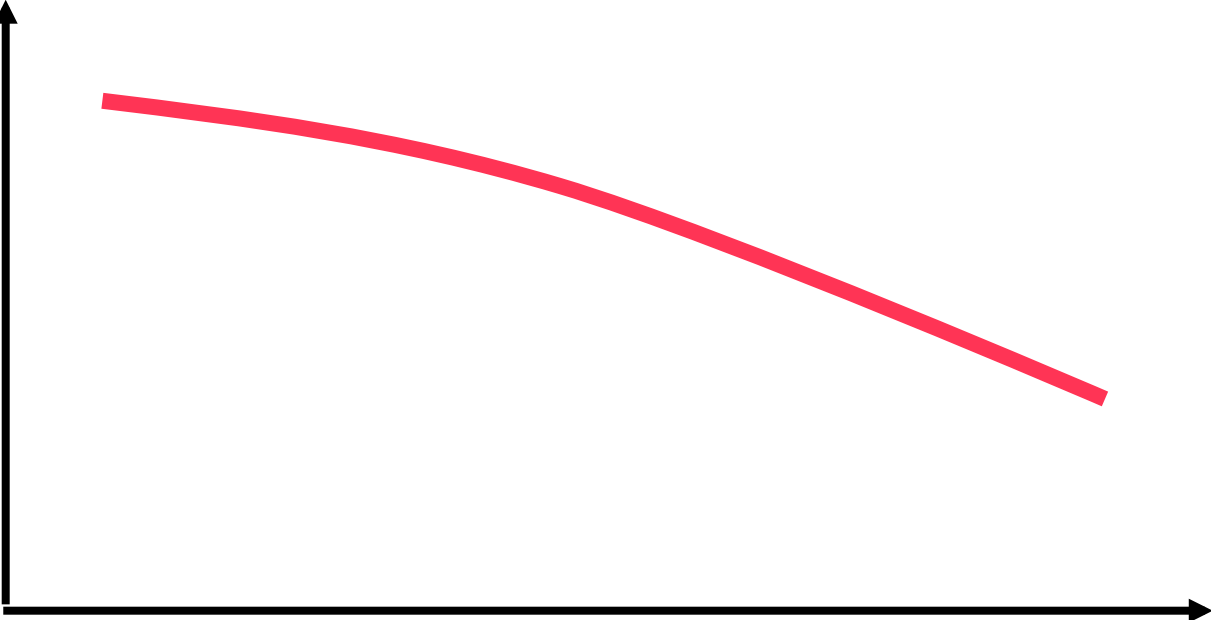
8.0 %



sodium hydroxide concentration



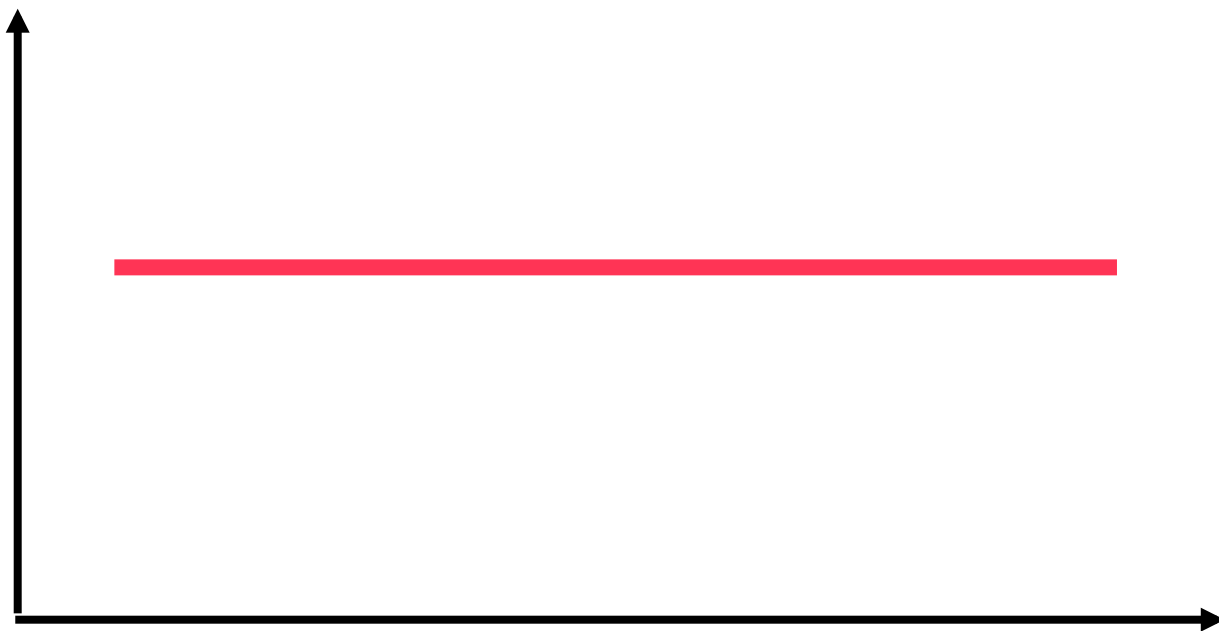
weight gain



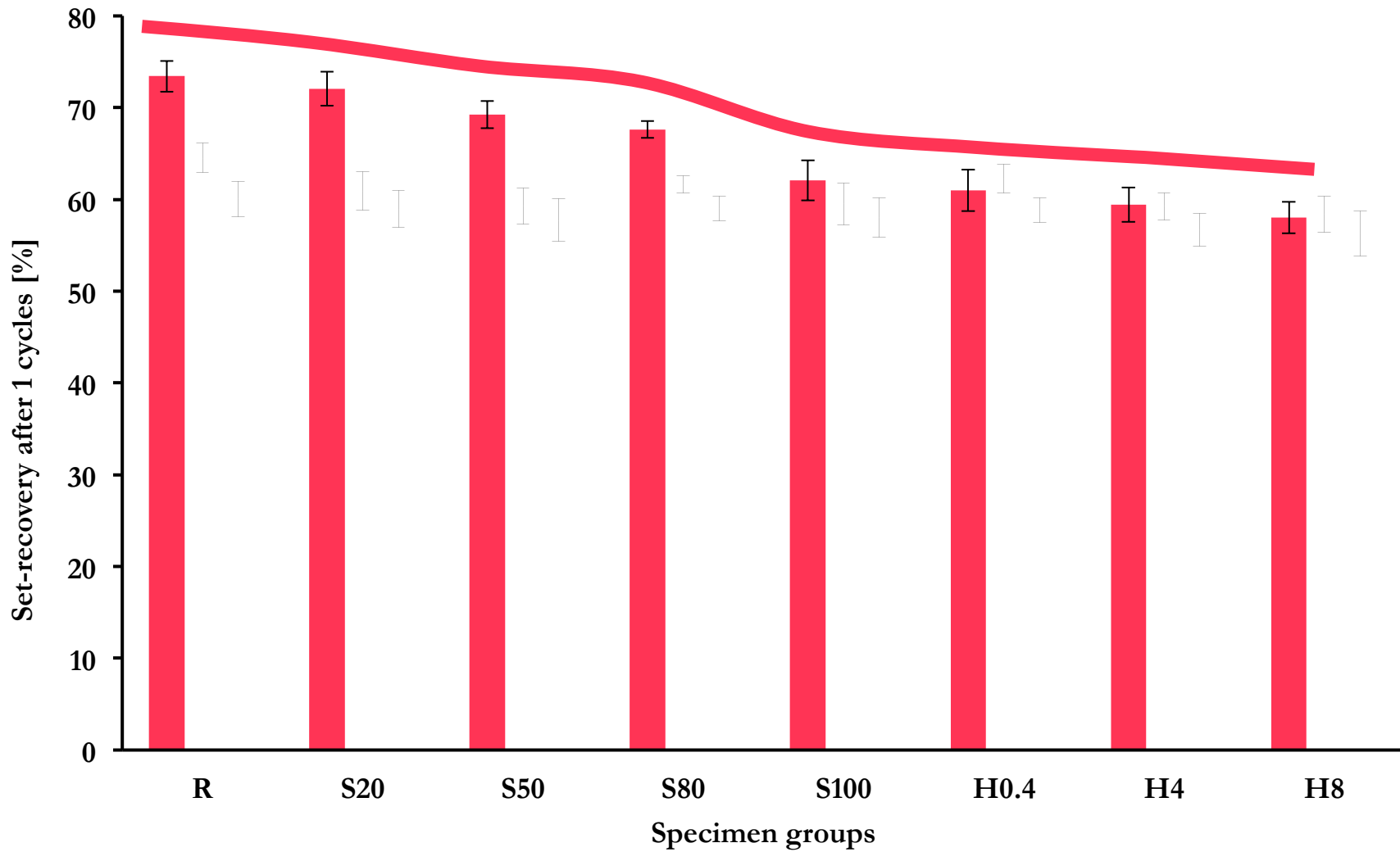
sodium silicate concentration

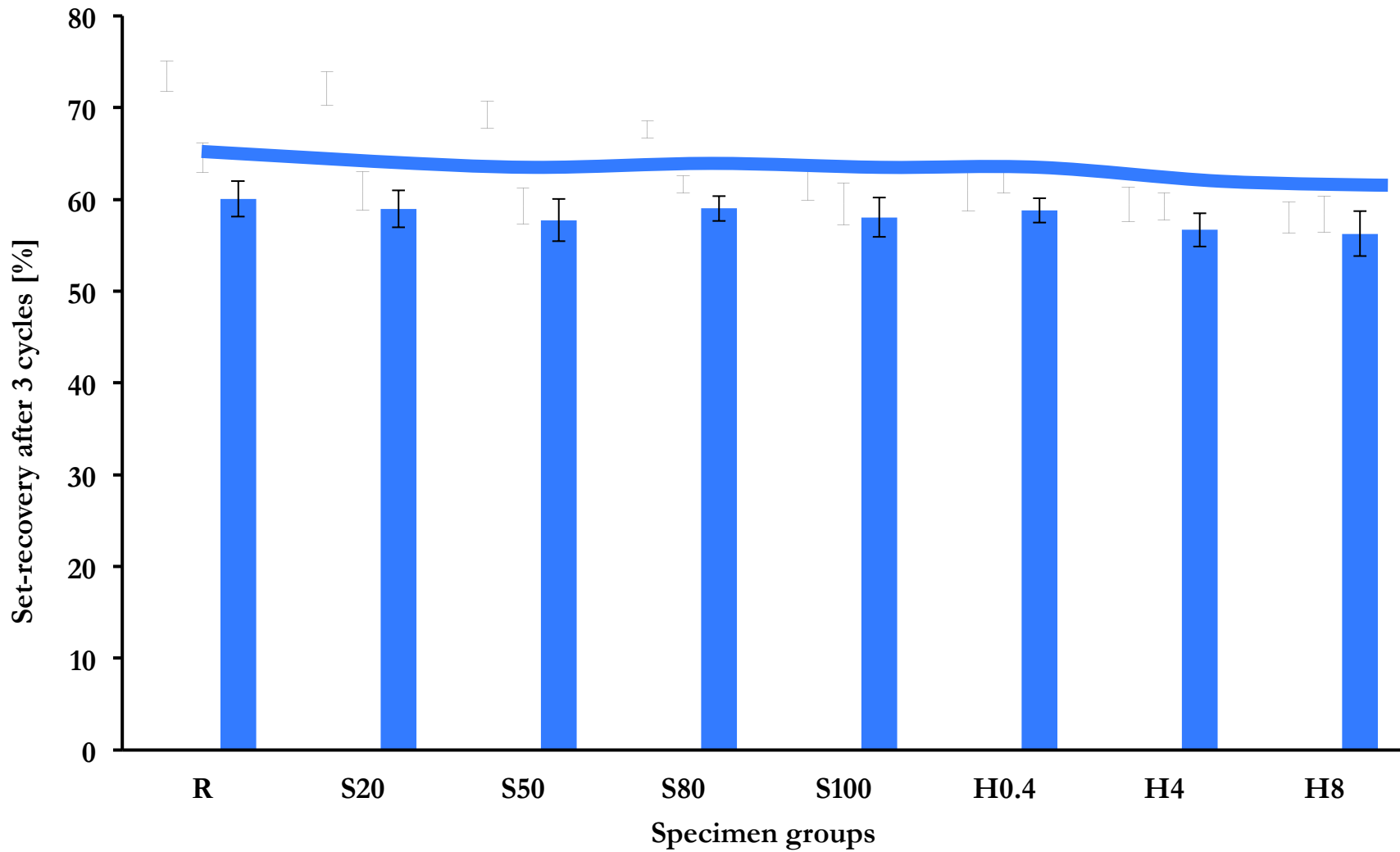


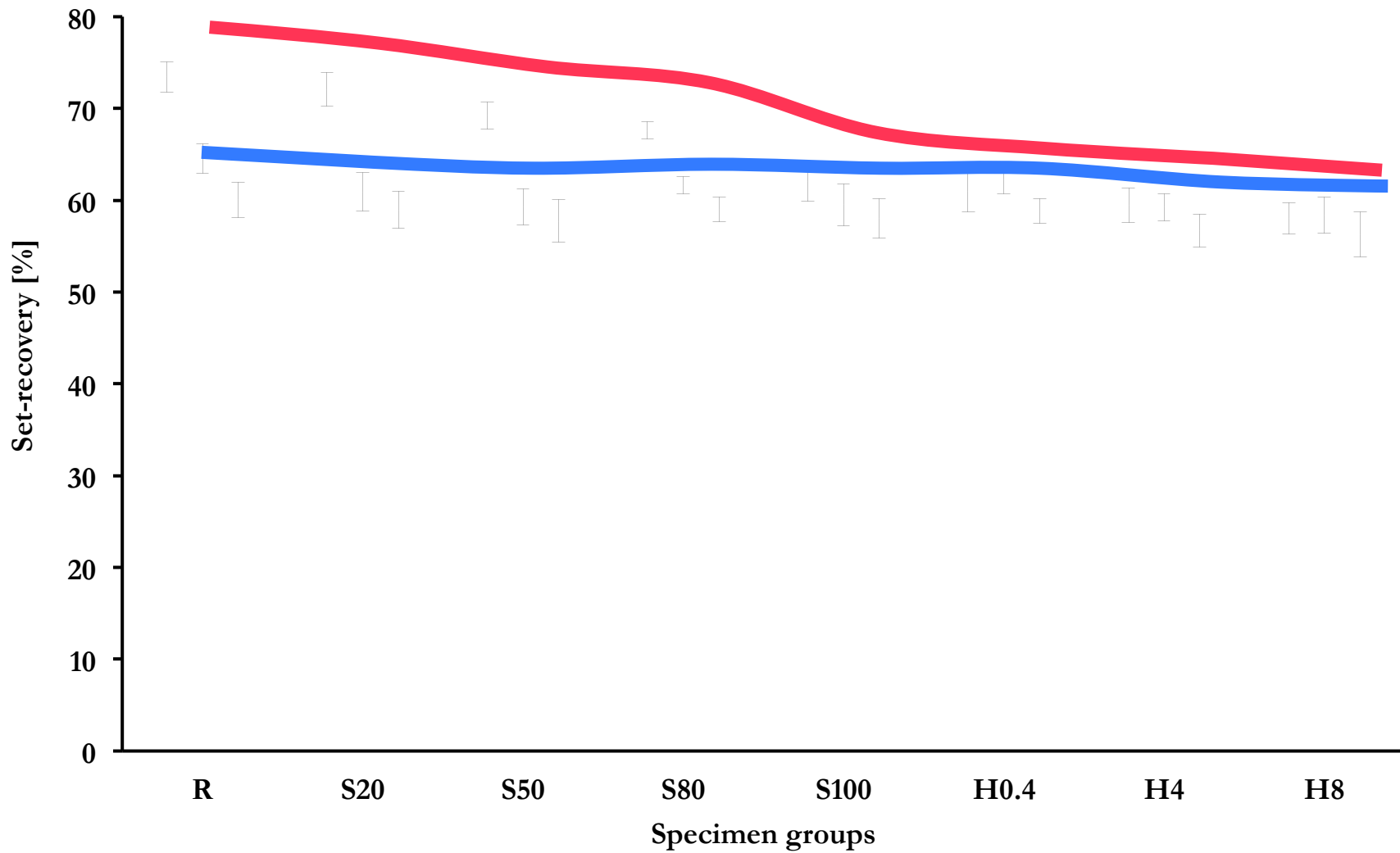
weight gain



sodium hydroxide concentration









too short?





longer impregnation time?



sodium hydroxide





sodium hydroxide

A male scientist with a beard, wearing a blue lab coat, safety glasses, and blue gloves, is leaning over a piece of laboratory equipment. He is looking intently at something out of frame. The background shows a laboratory setting with various pieces of equipment, including a red container and a white bucket. A red speech bubble with the text "thank you!" is overlaid on the image.

thank you!