

SUPPORTING INFORMATION

## Synthesis of poly(*N*-acryloylmorpholine) macromonomers using RAFT and their copolymerization with methacrylic acid for the design of graft copolymer additives for concrete.

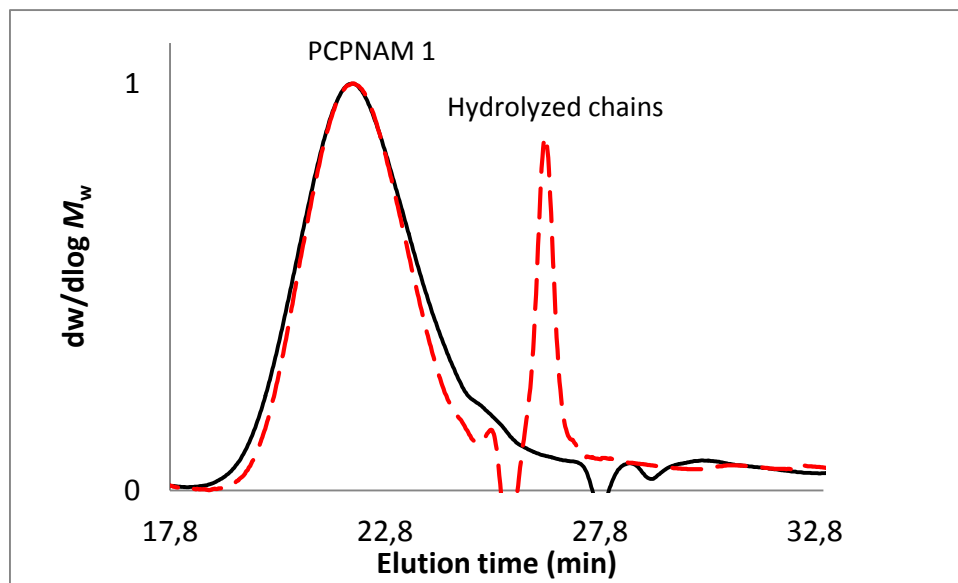
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### Stability of the potential superplasticizers under concrete formation conditions

As it can be seen on Figure S1, ultracentrifugation of PCPNAM1 allows a clean removing of the unreacted PNAM macromonomer after copolymerization. In addition, the trace of the PCPNAM1 after 3h15 of hydrolysis showed the formation of a species corresponding to hydrolyzed PNAM chains. The degree of hydrolysis was determined by comparing the area of this peak with the area of the peak corresponding to PCPNAM1.



**Figure S1.** Aqueous SEC analyses traces of a PCPNAM1 after ultracentrifugation and analyzed immediately after being dissolved in a saturated lime solution (black line) and of a PCPNAM1 after 3h15 in saturated lime solution (red dashed line).