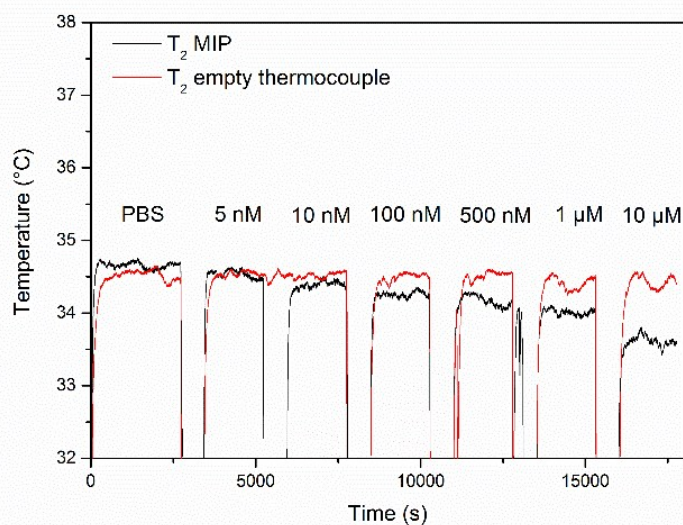
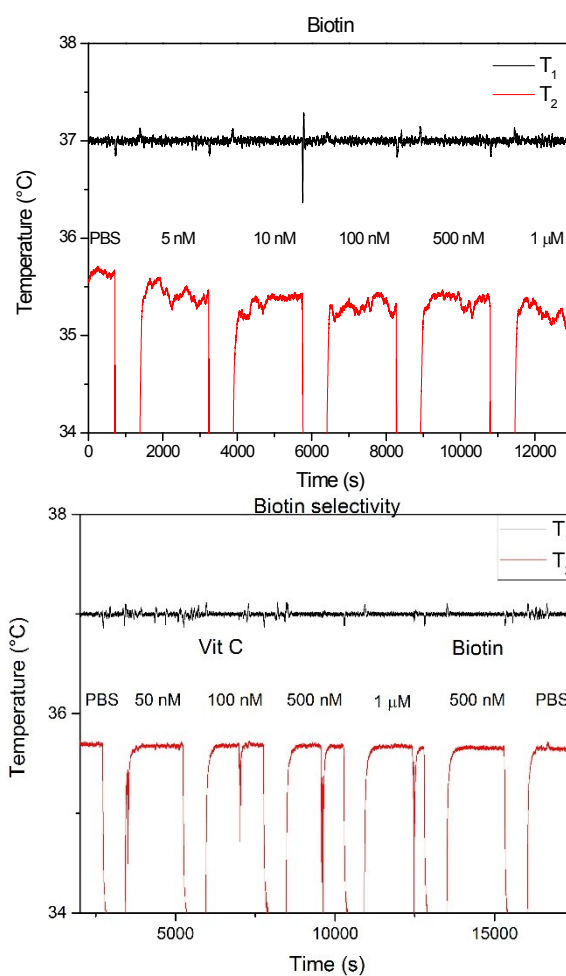


### Appendix A



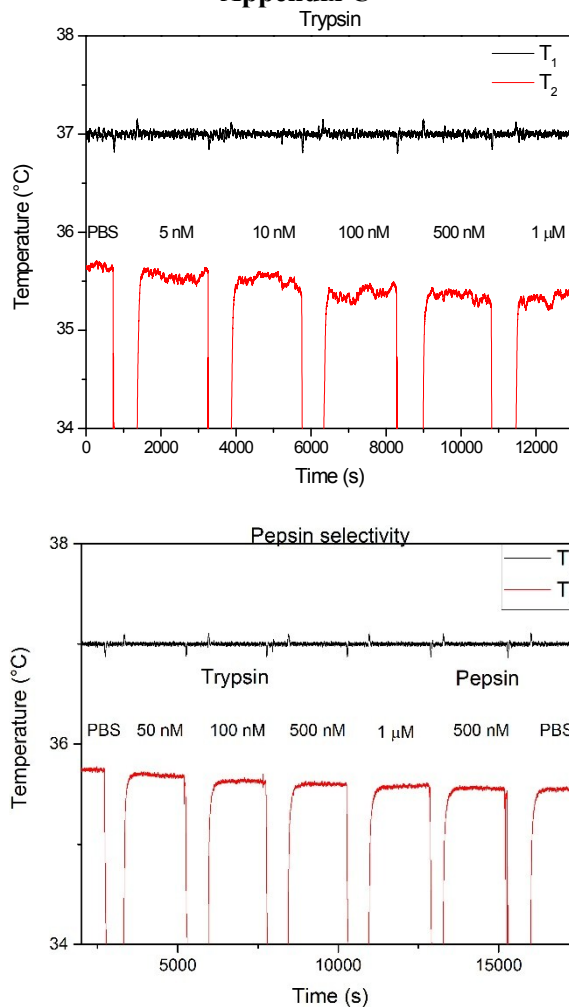
Appendix A. The temperature  $T_2$  is represented in time, when the signal is first stabilised in PBS and after subsequent addition of solutions with increasing concentrations of EGFR peptide (0-10000 nM). The red line indicates an empty (not-coated) thermocouple, which shows no significant change upon addition of the template. This is in contrast to when the thermocouple is coated with nanoMIPs for EGFR (black line), where temperature drops are recorded due to blocking of the heat-flow.

## Appendix B



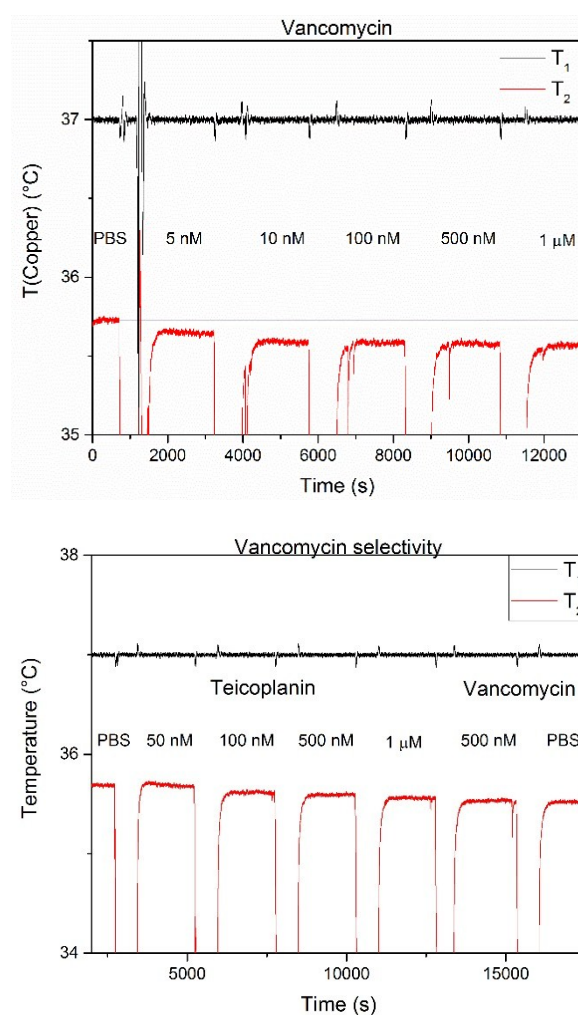
Appendix B. The upper panel shows the temperatures  $T_1$  and  $T_2$  that are measured by a thermocouple functionalized with nanoMIPs developed for biotin. Stabilization occurs in PBS and subsequently, solutions spiked with biotin were added (0-1000 nM). The lower panel shows the temperature upon exposure of a freshly prepared thermocouple with nanoMIPs to spiked solutions of vitamin C (0-1000 nM). Finally, a solution of biotin ( $c=500$  nM) was added to the system.

## Appendix C



Appendix C: The upper panel shows the temperatures  $T_1$  and  $T_2$  that are measured by a thermocouple functionalized with nanoMIPs developed for trypsin. Stabilization occurs in PBS and subsequently, solutions spiked with trypsin were added (0-1000 nM). The lower panel shows the temperature upon exposure of a freshly prepared thermocouple with nanoMIPs to spiked solutions of pepsin, a similar peptide (0-1000 nM). Finally, a solution of trypsin (500 nM) was added, which showed a slight decrease in the measured temperature.

## Appendix D



Appendix D : The upper panel shows the temperatures  $T_1$  and  $T_2$  that are measured by a thermocouple functionalized with nanoMIPs developed for vancomycin (spike vancomycin was when thermocouple was briefly disconnected). Stabilization occurs in PBS and subsequently, solutions spiked with vancomycin were added (0-1000 nM). The lower panel shows the temperature upon exposure of a freshly prepared thermocouple with nanoMIPs to spiked solutions of teicoplanin, which bears a high similarity with the template molecule (0-1000 nM). Finally, the template vancomycin was added ( $c=500$  nM).