STREPTAVIDIN COATED SURFACE

TECHNICAL NOTE N. 7

Functional features of streptavidin coated plates

The following parameters were analysed:
4.   stability tests:
      4.1   endurance under strong chemical contacts
      4.2   shelf life at 37°C
      4.3   temperature stress (transport simulation)
   4.4   long storage

4.   Stability tests:

4.1.   Endurance under strong chemical contacts
Endurance under strong chemical contacts was determined following method 1 (Biotinylated IgG from 500 to 0 ng/ml) where the first washing step was substituted by the following incubations:
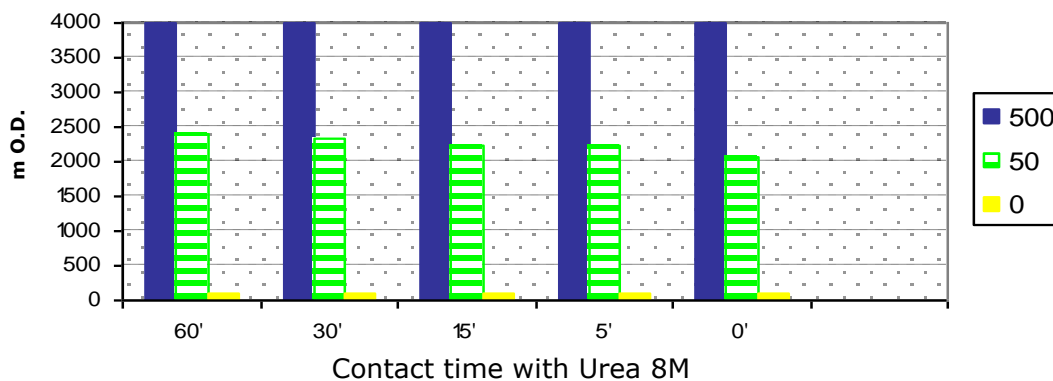
chemical compound	conditions
SDS 0.1%, 0.6M NaCl	56°C 2h
30% Formamide in 0.6M NaCl	37°C 2h
0.1% Tween® 20 in 0.1M PBS	37°C 2h
0.05M NaOH	R.T. 20'
0.2M NaOH	R.T. 20'
standard - 0.1% Tween® 20 in 0.1M PBS	4 x
Urea 8M	60'-30'-15'-5'

Results

stabitlity test: binding capacity towards Biotinylated IgG
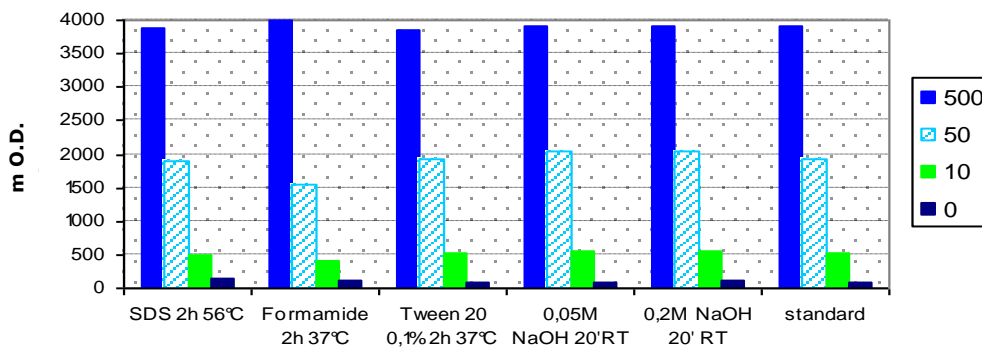
stabitlity test: binding capacity towards Biotinylated IgG

4.2. Shelf life at 37°C

Streptavidin coated wells maintained for 15 days at 37°C in comparison with standard stored at 4°C, were analysed with method 1 (biotinylated IgG =100 ng/ml)

temperature	4 ° C	37°C
m O.D.	2568	2667
CV%	3.3	3.6

4.3. Long storage

Streptavidin coated wells maintained for 30 months in a warehouse without air conditioning (temperature range from 10°C to 40 °C) in comparison with samples stored at 4°C (standard condition), were analysed with method 2.
The results show the exceptional stability of the coating.

temperature	4 ° C	R.T.
m O.D.	1890	1950
CV%	1.8	2.3

4.4. Temperature stress (transport simulation)
Stability was checked under different temperatures as those which may occur during transport.
Method 2 was used for comparing streptavidin coated plates subjected to the following conditions:

plate n.	conditions	time
1	4° C	10 days
2	22°-23° C	10 days
3	37° C	3 days
	22°-23° C	12 hours
	- 20° C	10 hours
	37° C	3 days
	22°-23° C	3 days

Results

stabitlity test: temperature stress

m O.D. vs ng/ml of Biotinylated Antibody — bars for 4°C, 22°-23°C, stress