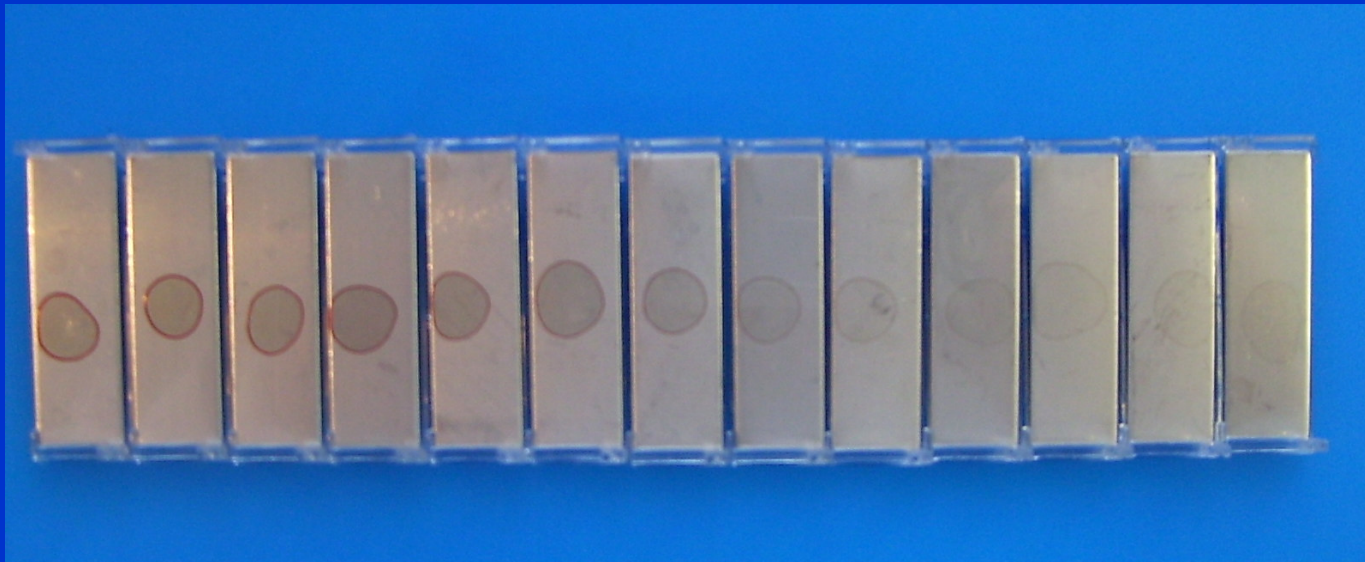


# **International congress for processing of medical products 2007**

Protein detection on medical products

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# Visibility?



# Test Kits

- BCA Protein Assay Kit (Pierce)
- Protect-M (Biotrace)
- Test-Kit for Protein Detection (Miele)
- HemoCheck-S (Pereg)

# BCA Protein Assay Kit

- Reagent A
- Reagent B
- Albumin standard ampules



# BCA Protein Assay Kit

- Working reagent (reagent A : B = 50 :1)
- 2 ml WR + 0,1 ml sample
- 2 ml WR + 0,1 ml protein standard
- 37 °C --> 30 min
- Photometer - 562 nm



# Modified BCA-Method

- Working reagent (reagent A : B = 50 :1)
- 1 ml WR + 0,1 ml sample (swab)
- 1 ml WR + 0,1 ml protein standard
- Incubation at room temperature
- Comparison of colour (30 min or 60 min)



# Protect-M

- Test tube  
(with reagents, colour label and swab)





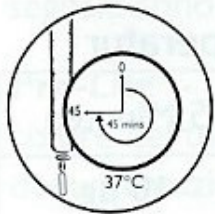
Moisten



Wipe



Mix



Incubate

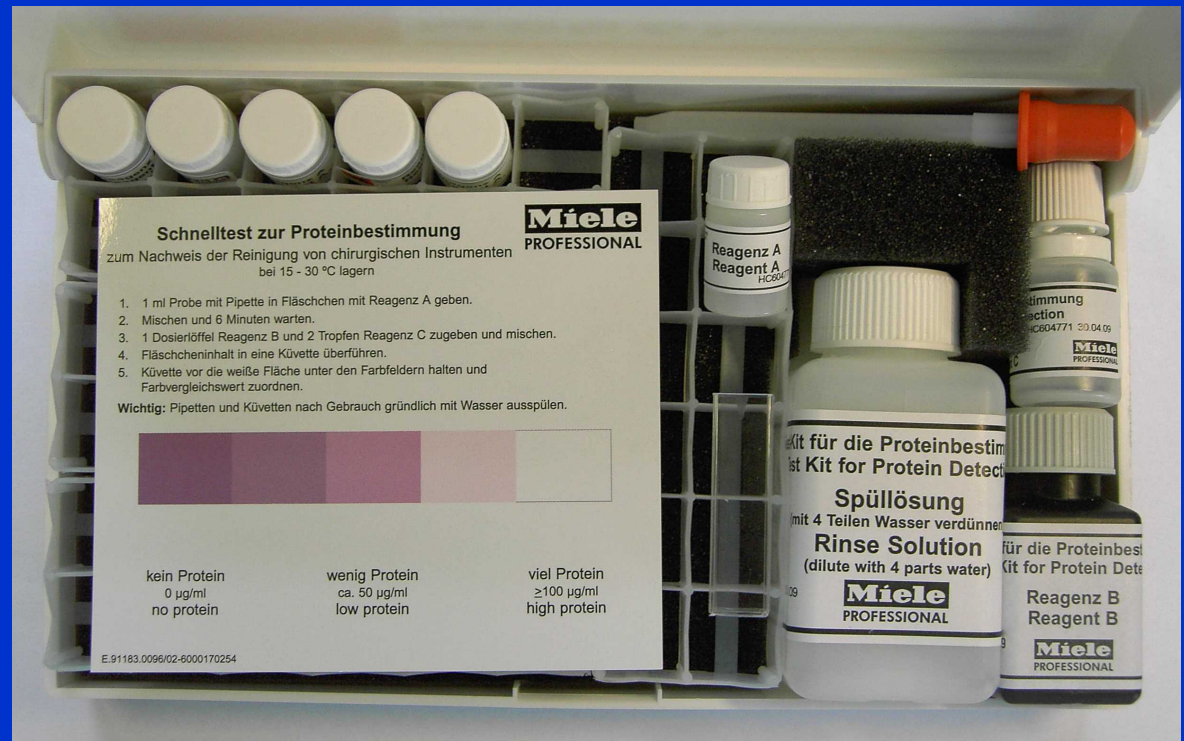


Colour comparison



# Test-Kit for Protein Detection (Miele)

- Reagents A - C
- Rinse solution
- 1 ml pipette
- Colour label
- Cuvette



# Test-Kit plus Reflectometer



# HemoCheck-S

- Test tubes
  - + Activator
  - + Indicator
- Swab

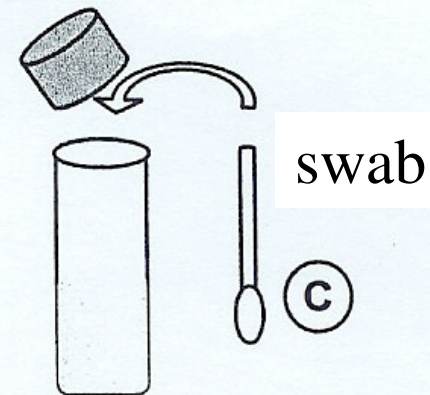
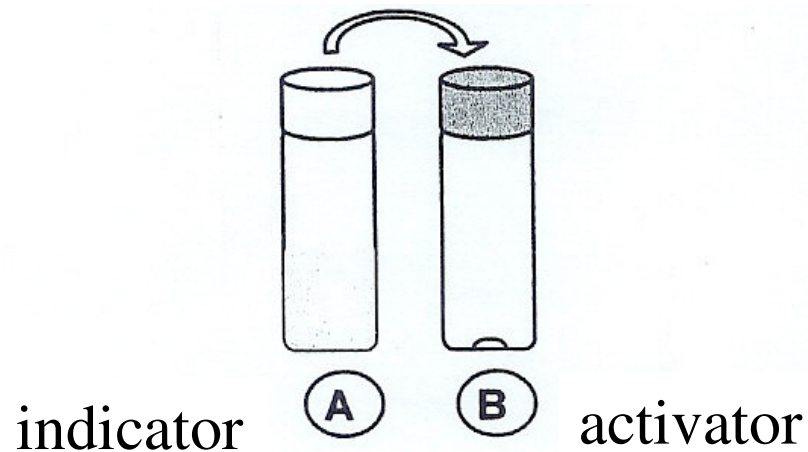




## Directions for use

## HemoCheck-S

HemoCheck-S for the detection of blood on surfaces



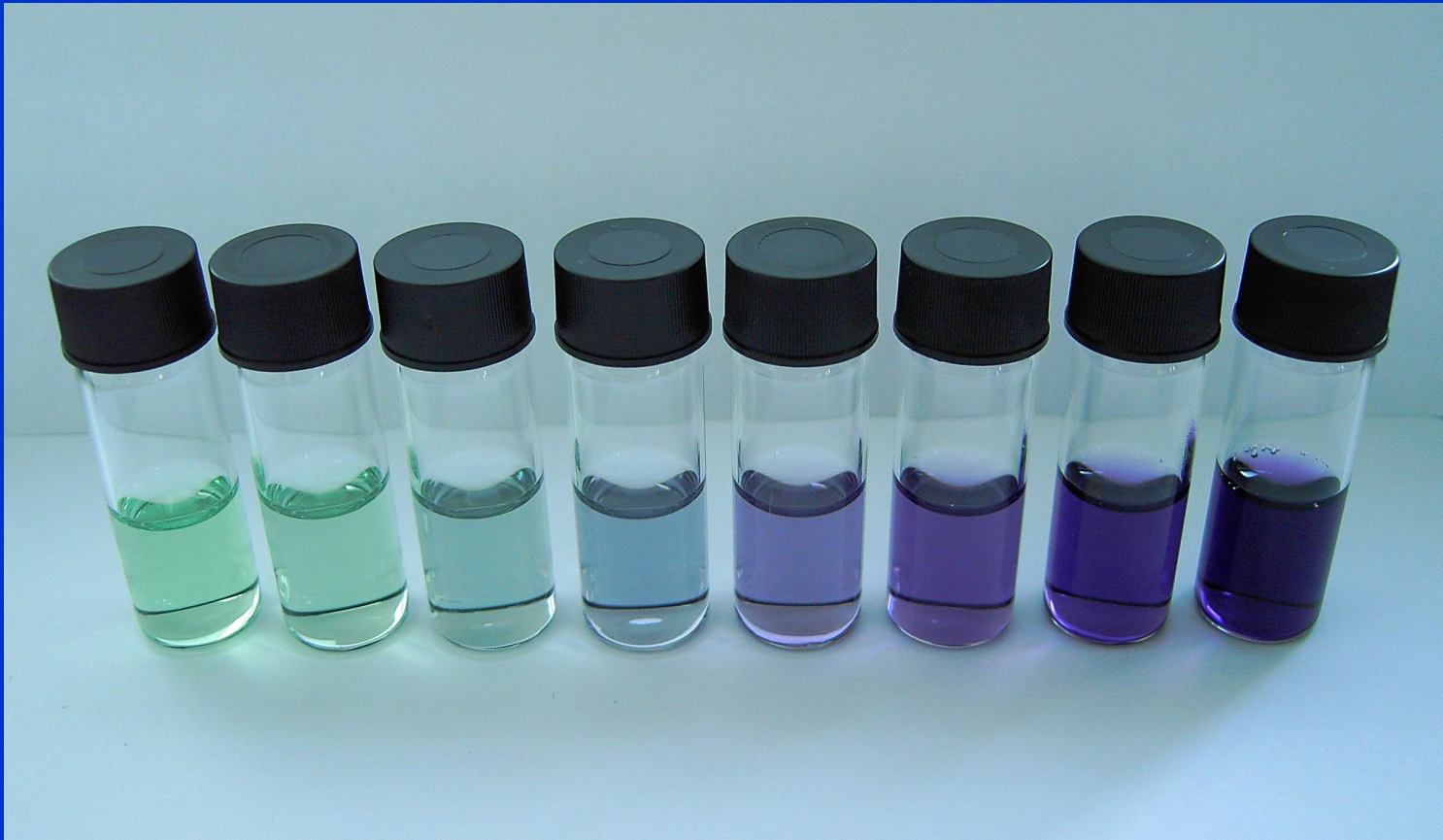
# Conducted Tests

- 1: Standardising - modified BCA-Method
- 2: Comparison test with sheep blood (BCA)
- 3: Comparison Protect-M - BCA
- 4: Test-Kit with Reflectometer (Miele)
- 5: HemoCheck-S

# Test description - BCA

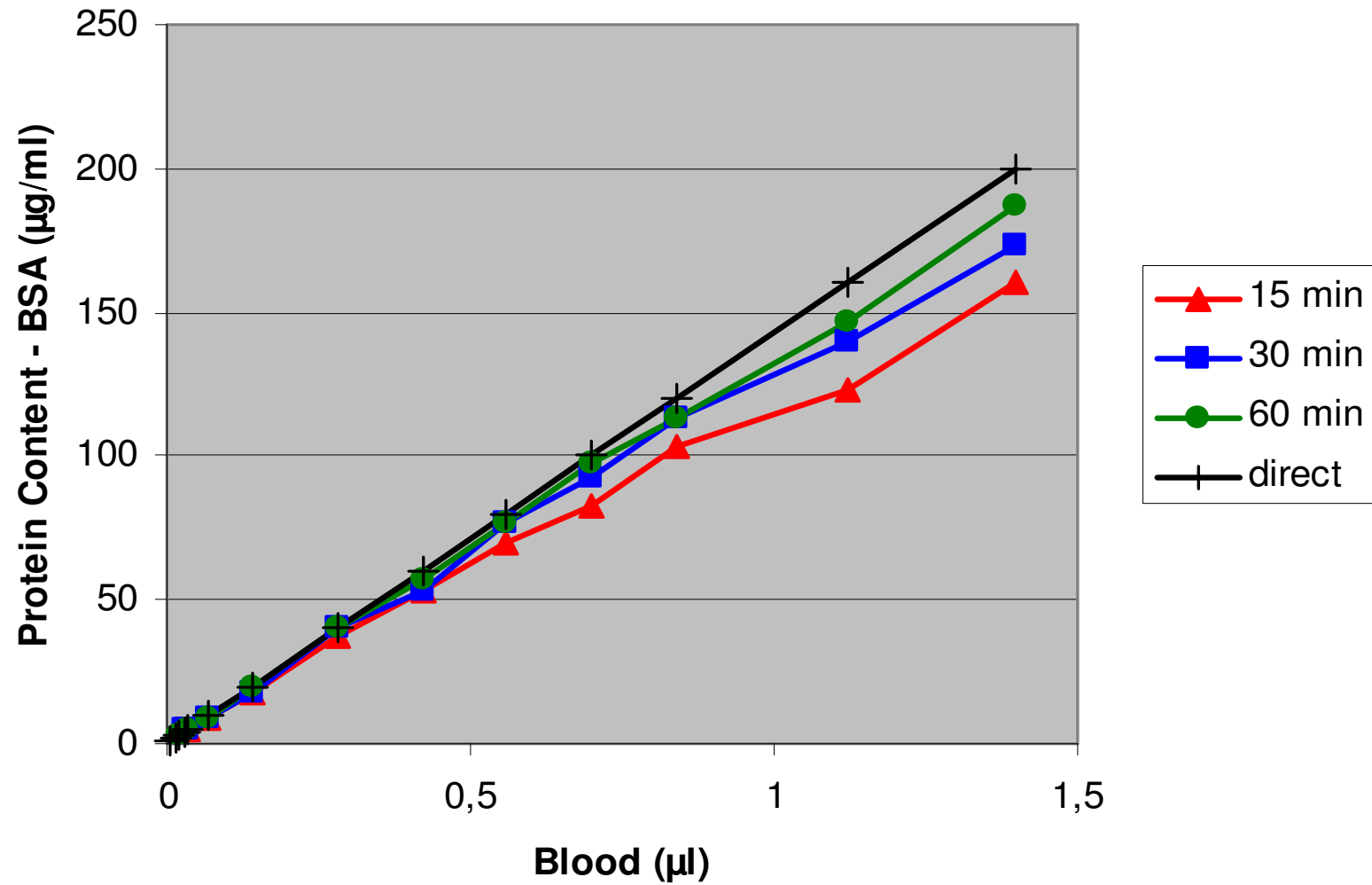
- BSA-Standards (1 - 200  $\mu\text{g}$ )
- Dilution series - defibrinated sheep blood
- Drying - metal plate (TOSI)
- Wipe - sterile swab
- Direct approach: 0,1 ml with pipette

# BSA-Standard Series (1 - 160 $\mu\text{g}$ )





## Test 1 + 2



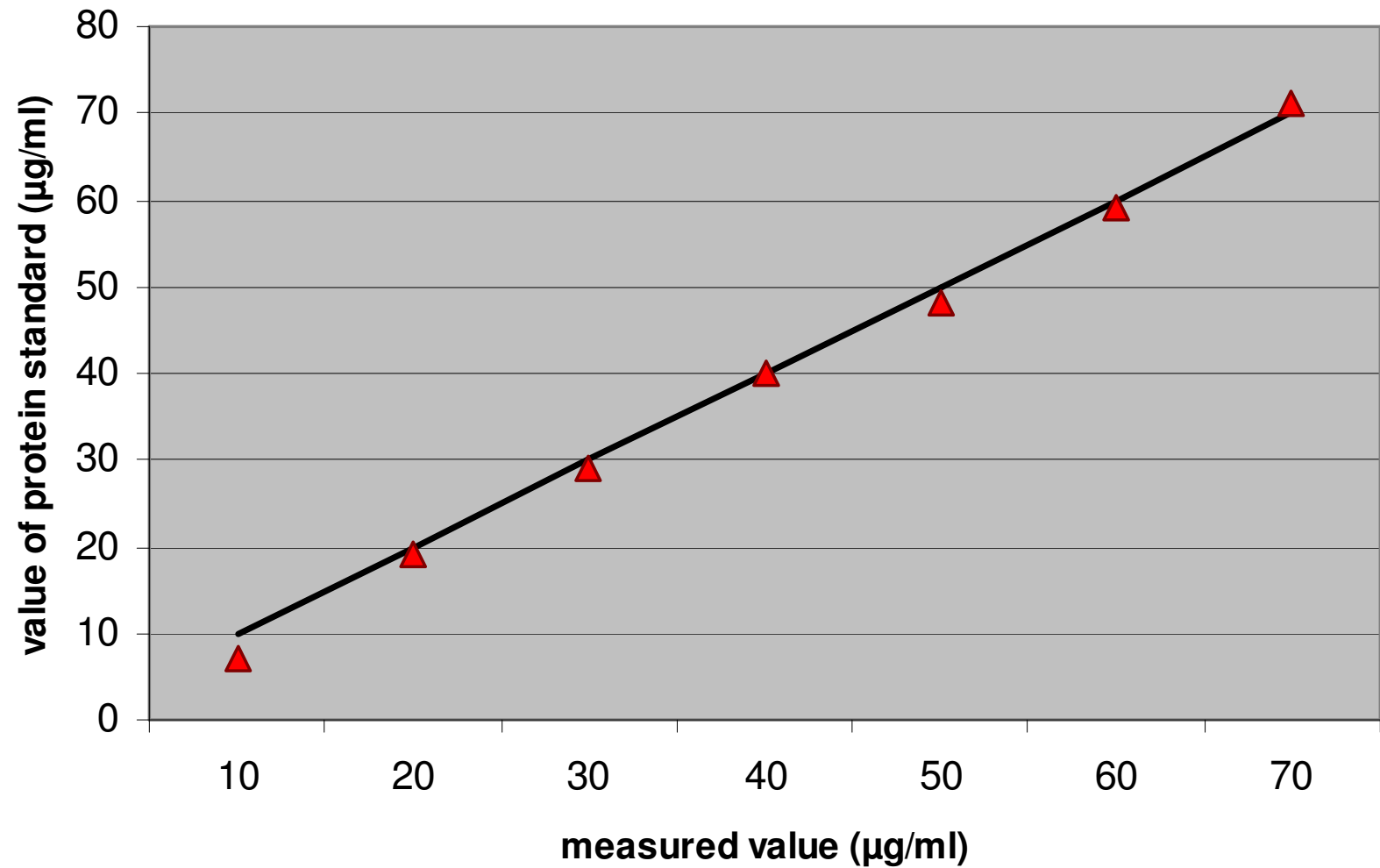
# Comparison: Protect-M - BCA



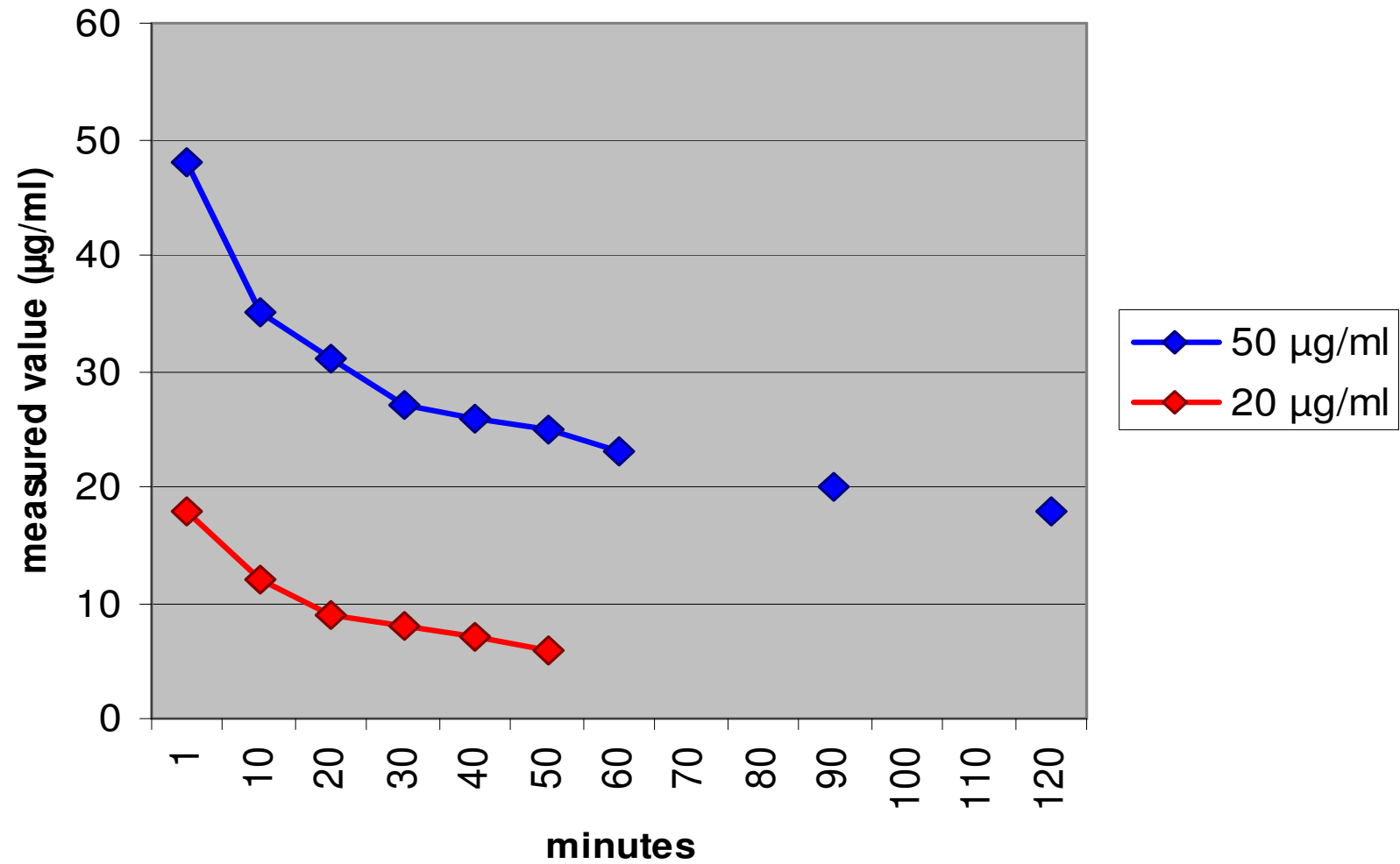
# Test description - Miele

- BSA-Standards (5 - 100  $\mu\text{g}$ )
- Blind test with rinse solution (SDS)
- Direct approach (with pipette):  
0,1 ml Protein standard + 0,9 ml SDS

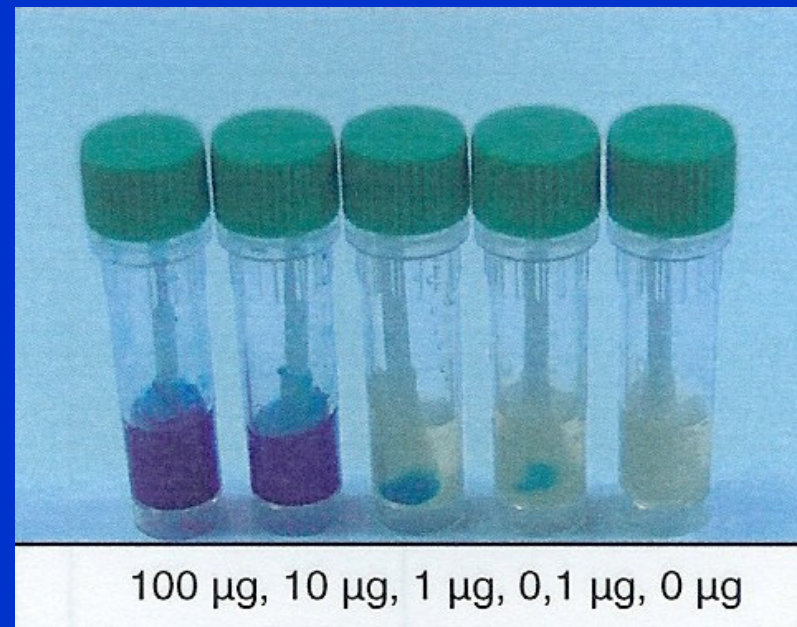
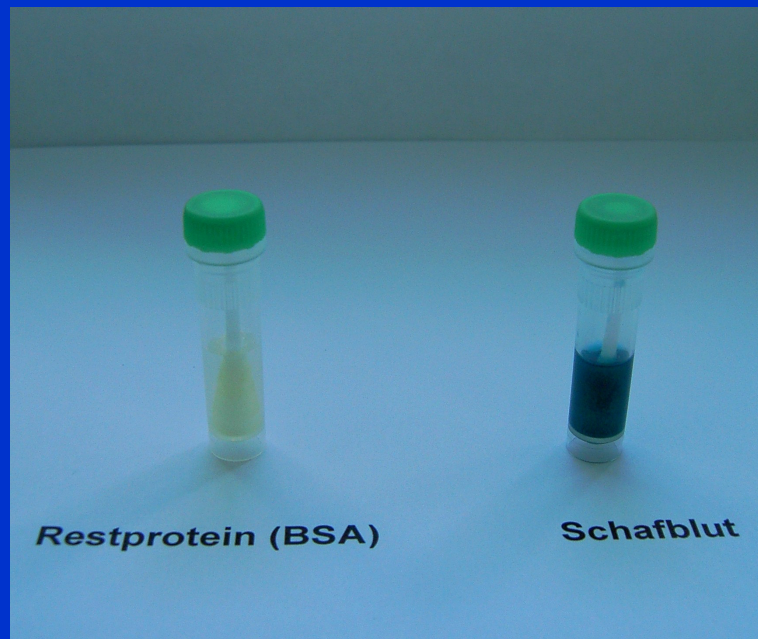
## Miele Test Kit / RQflex plus



relation: time - measured value



# HemoCheck-S



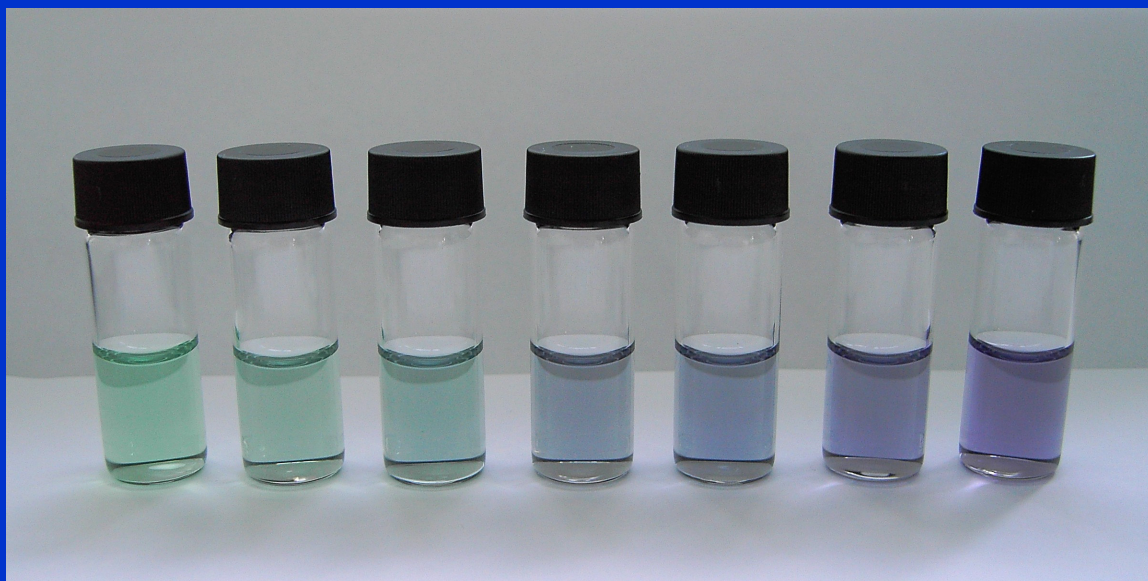
# Results

- HemoCheck-S detects blood ( $\sim 0,1\mu\text{g}$ )
- BCA, Protect-M, Miele: protein detection

Detection limits:  $\leq 5\mu\text{g}$  /  $10 - 70\mu\text{g}$

- Miele: quickest protein detection
- Protect-M: easiest handling
- BCA (modified): most flexible method





**Thank you  
for your  
attention**