

WHO Reference strains for RBC

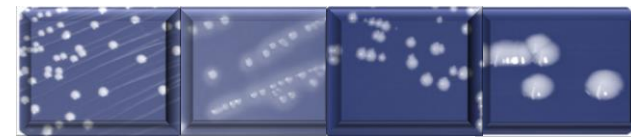
Growth kinetics of different bacterial species at low storage temperature



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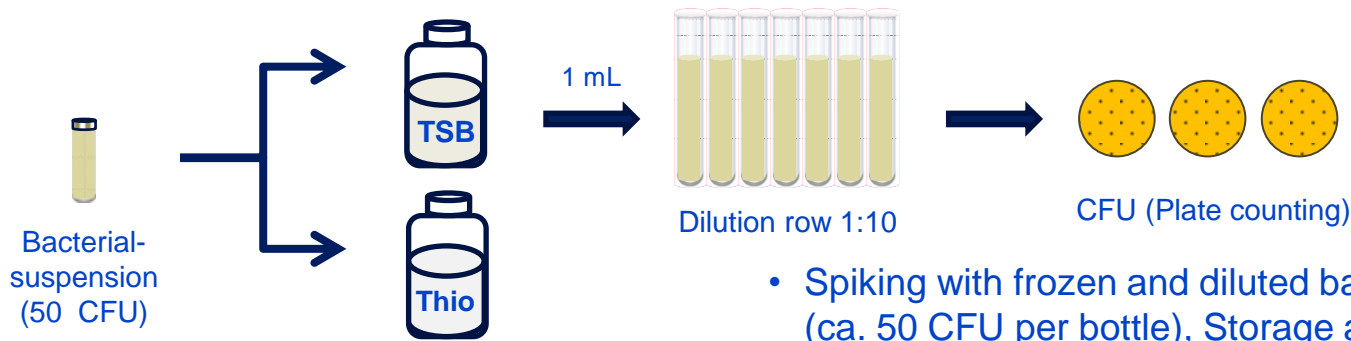


❖ Candidate strains for Red Blood Cell Concentrates

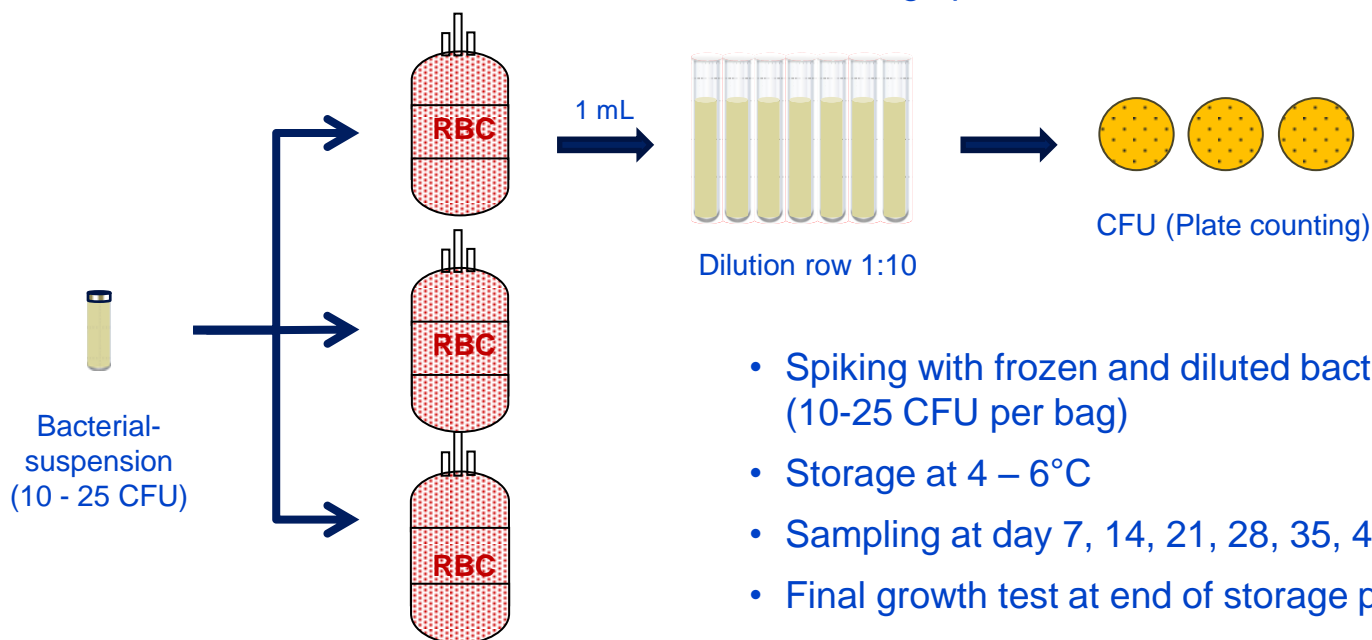
- **Test of Growth kinetics (protocol)**
- **Results**
- **Summary**



Growth Ability – protocol pretesting



- Spiking with frozen and diluted bacterial suspension (ca. 50 CFU per bottle), Storage at 4 – 6°C
- Sampling at day 7, 14, 21. Final growth test at end of storage period



- Spiking with frozen and diluted bacterial suspension (10-25 CFU per bag)
- Storage at 4 – 6°C
- Sampling at day 7, 14, 21, 28, 35, 42, 49
- Final growth test at end of storage period (BacT/Alert)



Bacterial Strains Undergoing Pretesting



Growing up to high bacterial counts	<i>P. fluorescens</i> PEI-B-P-77 <i>Y. enterocolitica</i> PEI-A-101, PEI-A-105
Persisting not growing	<i>B. thuringiensis</i> PEI-B-P-07, <i>B. cereus</i> PEI-B-P-57, <i>B. licheniformis</i> PEI-A-115 <i>S. aureus</i> PEI-A-93, PEI-A-153; <i>S. epidermidis</i> PEI-B-P-06, PEI-A-150 <i>S. pyogenes</i> PEI-B-P-20 <i>Micrococcus spp.</i> PEI-A-111 <i>K. oxytoca</i> PEI-A-117 <i>S. marcescens</i> PEI-A-144, PEI-B-P-56 <i>S. cholerasuis</i> PEI-A-104 <i>E. coli</i> PEI-S-80, PEI-A-154 <i>E. cloacae</i> PEI-A-149 <i>M. morgani</i> PEI-A-114 <i>P. aeruginosa</i> PEI-A-156, PEI-A-157 <i>A. junii</i> PEI-A-146
Not detectable	<i>S. epidermidis</i> , PEI-A-150; <i>S. warneri</i> , PEI-A-158 <i>K. pneumoniae</i> , PEI-A-103 <i>S. enterica</i> , PEI-A-97



Summary

- **Test of 27 strains**
- **The tested strains showed no difference of growth kinetics in media and RBC at storage temperature of 4° to 6°C**
- **For pretesting (influence of temperature) broth (TSB and Thio) is a suitable matrix for the strains tested so far**
- **3 strains showed real growth curves to high bacterial counts:**
 - Yersinia enterocolitica* (PEI-A-105, PEI-A-101),**
 - Pseudomonas fluorescens* (PEI-B-P-77)**
- **Strains await testing:**
 - Serratia liquefaciens*, *Listeria monocytogenes***



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