

Update on Bacterial Screening of Platelet Components by NHSBT

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NHS Blood and Transplant




Bacterial Screening Implemented Using BacT/ALERT in 2011



NHSBT Test Protocol

(1 test, Extension Shelf Life to 7 Days)

- **PC held for \geq 36hrs – 48hrs after collection**
 - **PC sampled and tested**
 - **Held for 6hrs**
 - **Released with a 7 day shelf life**
 - **Monitored for the component shelf life**
 - **Positives recalled**
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Initial Reactive and Confirmed Positive Rates (Cumulative Feb 2011 – Mar 2017)


	Number	Initial Reactive Rate	Confirmed Positive Rate
Apheresis*	1,212,638	0.34%	0.02%
Pooled*	459,936	0.25%	0.07%
Total	1,672,574	0.32%	0.04%

***Apheresis platelets screened from Feb 2011**

***Pooled platelets screened from May 2011**



Confirmed Positives (February 2011 – March 2017)

- **588 confirmed**
 - **566 Gram positives**
 - **22 Gram negatives**
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Confirmed Positive Gram Positive 'Pathogenic' Organisms (Feb 2011 – Mar 2017)

Organisms	n	Detection Time Range (h)	Total Contaminated Components
<i>Streptococcus dysgalactiae</i> (Group G/C)	16	2-19	19
<i>Staphylococcus aureus</i>	15	2-21	16
<i>Streptococcus pneumoniae</i>	12	9-13	16
<i>Streptococcus agalactiae</i> (Group B)	5	6-16	4
<i>Listeria monocytogenes</i>	4	14-20	5
<i>Bacillus cereus</i>	1	11-14	1

Total organisms: 53

Total components: 61


Confirmed Positive Gram Negative 'Pathogenic' Organisms (Feb 2011- Jun 2016)

Organisms	n	Detection Time Range (h)	Total Contaminated Components
<i>Escherichia coli</i>	8	3-14	17
<i>Serratia marcescens</i>	3	4-13	5
<i>Klebsiella oxytoca</i>	3	3-9	4
<i>Klebsiella pneumoniae</i>	2	4-11	3
<i>Pseudomonas aeruginosa</i>	1	15	1
<i>Campylobacter lari</i>	1	32	1

Total organisms: 18


Total components: 31

NHSBT Screening (February 2011 to March 2017)

- 1 transmission in >1.7million PC screened (*S.aureus*)
 - 4 near misses (3 *S. aureus* and *S. marcescens*)
 - False negative rate 1 in 340,000 (0.0003%)
 - 1 CP in 6015 TE platelets screened (*S. pneumoniae*)
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Conclusion

**Bacterial Screening
within NHSBT remains
to be an extremely
successful risk
reduction intervention!**



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THANK YOU

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