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## HEMA-QUEBEC'S EXPERIENCE WITH BACTERIAL CULTURE OF WHOLE-BLOOD DERIVED PLATELET CONCENTRATES (WBDPC)

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**Background:** We recently implemented bacterial culture of unpooled WBDPC.

**Aims:** To present our experience with bacterial culture of individual WBDPC samples.

**Methods:** Skin disinfection of donor is done using a two-step tincture of iodine and alcohol protocol. The first 40 ml of blood from each donation is diverted into a sample pouch used to fill tubes for lab tests (since February 2003). 18 hours after collection, a sampling device (SampLok Sampling Kit, IITL) is attached to the WBDPC using a sterile connecting device. 4 ml of concentrate is obtained and transferred to an aerobic blood culture bottle (BPA, bioMérieux) that is then placed in the Bac-T-Alert 3D (bioMérieux) detection system and incubated for 7 days. Bottles giving a positive signal are subcultured. Microbial identification is done by the Quebec Public Health Laboratory. The positive signal is considered a true positive if the same microorganism is isolated from a new sample of the WBDPC, and/or from samples of other components from the same donation.

**Results:** Bacterial culture of WBDPC was implemented in February 2005. As of December 2005, 58 out of 66,720 products cultured gave a positive signal. 11 (1/6,065) of these were true positives (10 coagulase negative staphylococci, 1 *Streptococcus pasteurianus*). 10/11 products were removed from inventory before transfusion; 1 product was transfused without adverse effect in the recipient. In the year 2005, there were no reports to the Quebec Hemovigilance System of adverse reactions due to bacterial contamination of WBDPC, whereas the numbers for the previous years were 7 (2000), 4 (2001), 7 (2002), 0 (2003), 1 (2004).

**Conclusions:** Bacterial culture of WBDPC, added to adequate disinfection of donor's skin and diversion of the first 40 ml of blood, has resulted in a very low risk of adverse reaction due to bacterial contamination of platelets.