

## WHITE PAPER

### B. BRAUN SAFEFLOW – FLUSHING STUDY

#### PURPOSE

To demonstrate the flushing efficiency of B. Braun "Swabable Straight Valves".  
Tested samples were the B. Braun Safeflow swabable valve.

#### PROTOCOL SUMMARY

AppTec Laboratory Services, St. Paul, MN, performed all laboratory testing. Three (3) B. Braun Safeflow "Swabable Straight Valves" were tested. 5 mL of human blood was aspirated through each valve. The valves were exposed to the blood for 10 minutes at room temperature. The blood was removed by the attached syringe immediately prior to initiation of flushing. Each valve was flushed with 1mL deionized water. The flushing was repeated five times. The eluates were collected into sample tubes and analyzed for total hemoglobin concentration and flushing efficiency (% clearance).

#### METHODS

The study included positive and negative controls. The positive controls were filled with a solution of 5.0 mL of sterile water mixed with 0.35 mL of whole blood. The negative controls were filled with water only.

Test samples: 5 mL of blood was aspirated through each sample valve and left for 10 minutes at room temperature. The syringe was then removed immediately prior to flushing. The valve tip was blotted, and a new syringe with flushing fluid was attached. Each valve was flushed with 1 mL of deionized water and the flush was collected into labeled tubes. The flush was repeated five times. The hemoglobin concentration in the samples was determined using Drabkin's reagent at 1:1 ratio. After a 15-minute incubation at room temperature, the absorbance of each sample was read using a spectrophotometer at a wavelength of 545 nm. Controls were tested concurrently. The total hemoglobin concentration and % clearance was determined for each flush separately.

#### RESULTS

100 % clearance was achieved by the 3<sup>rd</sup> flush for the B. Braun Safeflow "Swabable Straight Valve"

#### CONCLUSION:

The Safeflow valve has demonstrated that it can be effectively flushed using the methods performed in this study.

*Safeflow is distributed by B. Braun Melsungen AG*