MicroClave® and SmartSite®/SURPLUG Comparative Matrix

**MicroClave** by ICU Medical Inc.

- Flat swabbing surface
- Split-septum with internal blunt cannula
- Minimal residual volume
- Clear housing, visible fluid path
- Straight fluid path

1.807 g (MicroClave Clear)
1.874 g (MicroClave)

**SmartSite** by CareFusion Corp. (Dist. by Terumo JP Ltd.)

- Flat swabbing surface
- Normally open split-septum
- Minimal residual volume
- Clear housing, fluid path not visible
- Corrugated silicone fluid path

1.473 g

### MICROCLAVE TECHNOLOGY

- **Base Technology:** Internal cannula and silicone compression seal split-septum. Internal cannula windows are exposed by the insertion of a male luer, and cannula enters the male luer’s internal space to achieve flow.

- **Displacement:** Neutral: 0 to -0.01 mL, -0.0049 mL and -2.2 cm Published

- **Residual Volume:** 0.04 mL

- **Fluid Path:** Straight through polycarbonate cannula.

- **Moving Parts in Fluid Path:** No

- **Number of Assembly Parts:** 3, fluid path component does not move on luer access.

- **Fluid Residual External on Disconnect:** Minimal

- **Clamping Sequence:** None required

- **Flow Rate:** 165 mL/min

- **Clear Available:** Yes

- **Antimicrobial Available:** Yes

- **Bacterial Transfer Performance:** The least amount of bacterial transfer of any connector tested.

### SMARTSITE TECHNOLOGY

- **Base Technology:** Silicone compression seal split septum. No internal cannula. Silicone is depressed by the insertion of a male luer, pushing it into a wider chamber allowing the normally-open silicon septum seal to open, achieving flow through corrugated silicone.

- **Displacement:** Negative -0.04 mL and -17.5 cm Published

- **Residual Volume:** Valve not activated: 0.11 mL; Valve activated: 0.08 mL

- **Fluid Path:** Through corrugated silicone.

- **Moving Parts in Fluid Path:** Yes

- **Number of Assembly Parts:** 3, fluid path component moves on luer access.

- **Fluid Residual External on Disconnect:** Minimal

- **Clamping Sequence:** Clamp before disconnect.

- **Flow Rate:** 75 mL/min

- **Clear Available:** No

- **Antimicrobial Available:** No

- **Bacterial Transfer Performance:** Exhibits a higher bacterial transfer rate than MicroClave.

Performance data on file at ICU Medical Inc. San Clemente, CA 92673. Reference ENG-433

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