EASTMAN

RFP specifications for longer-lasting medical devices

More stringent disinfecting protocols to combat the rise of superbug threats in medical facilities have made designing durable medical devices challenging.

Minor changes to an RFP can ensure new devices are disinfectant-ready and able to meet the rigors of the hospital environment.

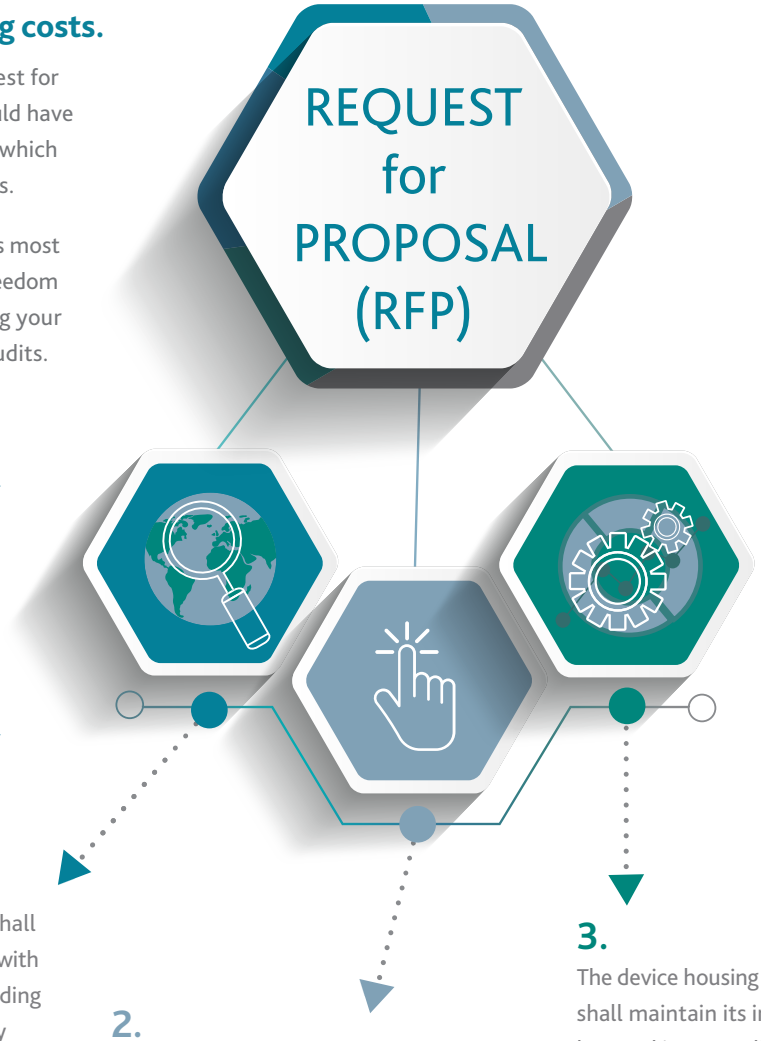
Improve patient safety; lower operating costs.

Consider including content similar to this in your request for proposal (RFP). If your RFP includes these items, you could have access to cleaner, safer, longer-lasting medical devices which would improve patient safety and lower operating costs.

By broadening the number of disinfectants in IFUs across most of the devices in your hospital, it could give you more freedom to purchase the disinfectants you want while improving your chances of having more successful Joint Commission audits.

mindray

The BeneVision N-Series patient monitors by Mindray tackle cleanability and durability with a five-year warranty enabled by Eastman medical polymers.



1.
The device housing and hardware shall be made of materials compatible with a wide range of disinfectants, including bleach, alcohol, quats (quaternary ammonium), and hydrogen peroxide used for cleaning up to (X) times per day throughout the device's expected service life of (X).

2.
The device housing shall not become sticky to the touch after cleaning with the preceding listed types of disinfectants up to (X) times per day throughout the device's expected service life of (X).

3.
The device housing and hardware shall maintain its integrity when bumped into a wall or dropped in the course of normal use throughout the device's expected service life.

See the reverse side for actual disinfectant testing results.

Test housing material performance using a simple 4-step test.

Materials	Control (joules)	DISINFECTANTS						
		Diversey Virex® TB (ether, benzyl quat)	Clorox Healthcare® Bleach Germicidal Wipes (germicidal hypochlorite)	Clorox Healthcare® Multi-Surface (IPA quat)	Clorox Healthcare® Hydrogen Peroxide (H_2O_2 cleaner)	PDI Sani-Cloth® AFIII (benzyl quat, DPG ether)	PDI Super Sani-Cloth® (IPA quat)	PDI Sani-Cloth® Plus (IPA benzyl quat)
		% RETENTION OF IMPACT ENERGY TO BREAK						
Eastman Tritan™ MX711 copolyester	4.3	75 ± 26	89 ± 1	92 ± 4	95 ± 5	109 ± 3	101 ± 3	114 ± 1
Eastman Tritan™ MX731 copolyester	4.3	65 ± 24	96 ± 5	98 ± 5	99 ± 5	104 ± 2	100 ± 2	116 ± 1
Eastman Tritan™ MXF121 copolyester	4.8	91 ± 1	95 ± 3	90 ± 5	89 ± 1	94 ± 2	87 ± 2	100 ± 1
Eastman MXF221 copolyester	5.2	94 ± 2	95 ± 2	92 ± 3	98 ± 1	93 ± 4	83 ± 1	96 ± 3
PC/PBT	5.3	8 ± 3	98 ± 2	57 ± 45	94 ± 2	9 ± 2	91 ± 8	16 ± 2
PC/polyester	5.5	6 ± 1	6 ± 2	91 ± 12	23 ± 1	5 ± 0	75 ± 28	8 ± 2
PC/ABS 1	6.8	15 ± 1	70 ± 21	84 ± 13	97 ± 2	20 ± 3	16 ± 1	71 ± 22
PC/ABS 2	6.6	Break on jig	102 ± 1	64 ± 21	69 ± 32	6 ± 1	42 ± 37	5 ± 0
PVC	4.5	19 ± 2	19 ± 0	45 ± 36	56 ± 32	46 ± 36	18 ± 2	100 ± 0

% Retention

☐ ≥ 80% ▒ ≥ 60% ■ < 60%

Step 1: Select a strain jig to replicate stress in the device. **Step 2:** Place plastic tensile bars on a 1.5% strain jig. **Step 3:** Apply disinfectants to tensile bars and enclose in a plastic bag for 24-hour exposure at room temperature. **Step 4:** The most critical step. Remove tensile bars from the jig and run a reverse side impact test on the exposed and control samples. The percent of impact strength retention shows differences in mechanical integrity of plastics after exposure to disinfectants, giving an indication of how well the plastic will withstand cleaning and the normal rigors of a hospital environment.

For more information and to view the full test, visit eastman.com/medical or email plasticsmedicalteam@eastman.com.

EASTMAN

The results of **insight**™

Eastman Corporate Headquarters
P.O. Box 431
Kingsport, TN 37662-5280 U.S.A.

U.S.A. and Canada, 800-EASTMAN (800-327-8626)
Other Locations, +(1) 423-229-2000

www.eastman.com/locations