

*BioSurface Technologies Corporation*

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## **CDC Biofilm Reactor®**

The CDC Biofilm Reactor consists of eight (8) polypropylene coupon holder rod suspended from a UHMW-polyethylene ported lid. The coupon holder rods can accommodate three 1/2 in. (12.7 mm) diameter coupons each. The lid with coupon holders and coupons is mounted in a 1 liter glass vessel with side-arm discharge port. A liquid growth media/biocide/etc. is circulated through the vessel while mixing and shear is generated by a magnetic stir bar/vane rotated by a magnetic stir plate.

Sampling of the coupons is conducted by aseptically removing individual coupon holder rods with accompanying coupons (3). The coupon holder or a blank is replaced in the lid after sampling to allow the time course experiment to continue.

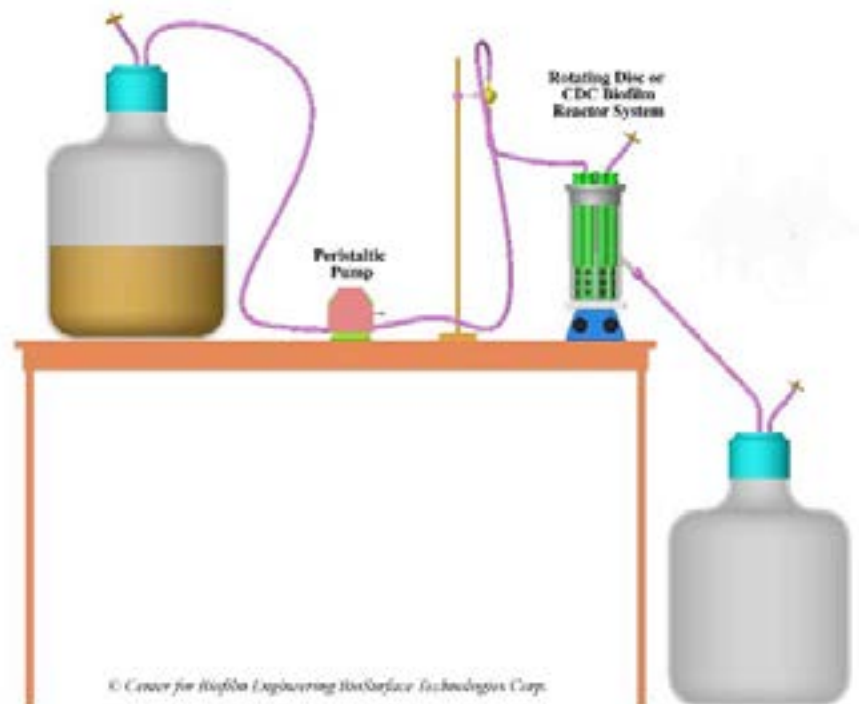
The coupon removed from the reactor vessel is then used for treatment evaluations, scraped to collect the biofilm sample for further study, or imaged using microscopy and image analysis.

The CDC Biofilm Reactor is autoclavable and re-useable. The total liquid volume is approximately 350 ml. A variety of coupon materials are available, including plastics, metals, and ceramics.



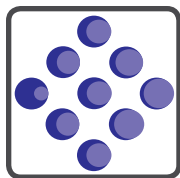
### **CBR 90 CDC Biofilm Reactor**

(CDC Biofilm Reactor Licensed from the Centers for Disease Control)



### **Reactor Set-Up**

(pumps, tubing, and reservoirs not included)



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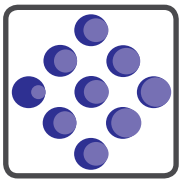
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## **CDC Biofilm Reactor®**

<b>Model CBR 90 - 2 CDC Biofilm Reactor w/o stir plate</b>	<b>\$960.00</b>
Includes polycarbonate coupons (24), side-discharge vessel with ported lid, coupon holder rods (8), blank coupon holder rod, coupon removal tool, stir bar/vane, glass flow breaks (2), coupon manipulation tool, bacterial air vent, operations manual, 6 month limited warranty.	
<b>Model CBR 90 - 1 CDC Biofilm Reactor System with Standard Stir Plate (115 VAC) Standard Magnetic Stir Plate (110-120 VAC) and reactor supports.</b>	<b>\$1,460.00</b>
Includes reactor supports and stir plate (110 - 120 VAC, CE certified), polycarbonate coupons (24), side-discharge vessel with ported lid, coupon holder rods (8), blank coupon holder rod, coupon removal tool, stir bar/vane, glass flow breaks (2), coupon manipulation tool, bacterial air vent, operations manual, 6 month limited warranty.	
<b>Model CBR 90 - 1 - Int CDC Biofilm Reactor System with Stir Plate (230 VAC/CE) Standard Magnetic Stir Plate (220-240 VAC, CE Certified) and reactor supports.</b>	<b>\$1,540.00</b>
Includes reactor supports and stir plate (230 VAC, CE certified), polycarbonate coupons (24), side-discharge vessel with ported lid, coupon holder rods (8), blank coupon holder rod, coupon removal tool, stir bar/vane, glass flow breaks (2), coupon manipulation tool, bacterial air vent, operations manual, 6 month limited warranty.	
<b>Model CBR 90 - 1DH CDC Biofilm Reactor System with Digital Stir/Hot Plate Digital Stir/Hot Plate with Temperature Control (110-120 VAC) and reactor supports.</b>	<b>\$2,290.00</b>
Includes reactor supports and digital stir/hot plate with temperature control (110 - 120 VAC, CE certified), polycarbonate coupons (24), side-discharge vessel with ported lid, coupon holder rods (8), blank coupon holder rod, coupon removal tool, stir bar/vane, glass flow breaks (2), coupon manipulation tool, bacterial air vent, operations manual, 6 month limited warranty.	
<b>Model CBR 90 - 1DH - Int. CDC Biofilm Reactor System with Digital Stir/Hot Plate Digital Stir/Hot Plate with Temperature Control (220-240 VAC/ CE certified ) and reactor supports</b>	<b>\$2,440.00</b>
Includes reactor supports and digital stir/hot plate with temperature control (230 VAC, CE certified), polycarbonate coupons (24), side-discharge vessel with ported lid, coupon holder rods (8), blank coupon holder rod, coupon removal tool, stir bar/vane, glass flow breaks (2), coupon manipulation tool, bacterial air vent, operations manual, 6 month limited warranty.	
<b>Model CBR 90 - 3 Anaerobic/Sealed CDC Biofilm Reactor w/o stir plate</b>	<b>\$1,380.00</b>
Includes lid with silicone gasket seals for coupon holder rods and lid seal to glass vessel, polycarbonate coupons (24), side-discharge vessel with ported lid, coupon holder rods (8), blank coupon holder rod, coupon removal tool, stir bar/vane, glass flow breaks (2), coupon manipulation tool, bacterial air vent, operations manual, 6 month limited warranty.	

\*Pricing shown is for domestic US Market. Please Contact BioSurface Technologies Corporation, or one of our international distributors for international pricing. International customers will incur additional charges associated with shipping, insurance, import duties, taxes, and fees that are not covered by BioSurface Technologies Corporation.

[Many coupon materials available including plastics, metals, and ceramics. Contact BioSurface Technologies for a complete listing.]



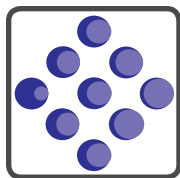
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## **CDC Biofilm Reactor® Components and Parts**

CBR-2203	CDC Biofilm Reactor Coupon Holder Polypropylene coupon holder (holds 3 coupons each)	\$38.00
CBR-2203-MBM	CDC Biofilm Reactor Membrane Holder Polypropylene rod with polycarbonate frame to hold membrane samples	\$76.00
CBR -2203-GL	CDC Biofilm Reactor Slide Holder Polypropylene rod to hold 0.70 inch (18 mm) or less wide x 0.063 inch(1.6 mm) thick slide coupons	\$36.00
CBR -2203-PM	CDC Biofilm Reactor Porous Media Holder Polypropylene Slide Holder Rod plus polycarbonate porous media/membrane holder cartridge	\$88.00
CBR-2203B	CDC Biofilm Reactor Holder Blank (no coupon recesses) Polypropylene coupon holder -blank	\$32.00
RD 140	Side-arm flask 1-liter glass beaker with side-arm port at 400 ml (nominal)	\$108.00
CBR 2201/2202	Stir Bar/Vane Assembly	\$82.00
CBR 2204	Ported Lid Assembly includes: glass rod shaft and ported lid	\$240.00
CBR 1969	Glass Pivot Rod	\$20.00
CBR 1969/BF	Glass Pivot Rod and Bulkhead fitting with gasket	\$26.00
CBR 9231	Replacement Stainless Steel (316) Set Screw (for CBR 2203) 24/pkg	\$8.00
CBR 5497	Coupon Removal Tool (Hex Tool)	\$8.00
CBR 02915	Bacterial Vent Filter (0.45 um)	\$18.00
CBR 2218	Temperature Probe Well (includes Bulkhead Fitting and gasket)	\$20.00
FB 50	Glass Flow Break	\$40.00
CBR 2232	Splash Guard Sampling Tube Insert (50 ml sample tube insert)	\$22.00
CBR 2240	Splash Guard Sampling Tube Insert (250 ml sample tube insert)	\$27.00
CBR 2210	Coupon Manipulation Tool-Stainless Steel Coupon Tweezer	\$60.00

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## Disc Coupon Materials for the CDC, RDR, and IBR Reactors

<b>Part Number</b>	<b>Description</b>	<b>Price per coupon (USD)*</b>
RD128-304	Stainless Steel (304) Coupon	\$6.80
RD128-316	Stainless Steel (316L) Coupon	\$6.80
RD128-316EP	Stainless Steel (316L) Coupon (Electropolished Surface)	\$12.50
RD128-316HP	Stainless Steel (316L) Coupon (Hand Polished Surface)	\$16.00
RD128-347	Stainless Steel (347) Coupon	\$7.60
RD128-ABS	Acrylonitrile Butadiene Styrene (ABS) Coupon (non-autoclavable)	\$5.50
RD128-AL	Aluminum Coupon	\$6.00
RD128-BUNA	AHW White High Grade FC Buna N Rubber Coupon	\$4.50
RD128-CC	Concrete Coated Polycarbonate Coupon (polycarbonate cup filled with concrete)	\$8.80
RD128-CI	Cast Iron Coupon	\$6.90
RD128-CoCr	Cobalt Chrome Coupon (Alloy F1537)	\$31.00
RD128-CPVC	CPVC Coupon	\$5.80
RD128-CS	Carbon Steel Coupon	\$6.60
RD128-Cu	Copper Coupon	\$8.20
RD128-DI	Ductile Iron Coupon	\$8.60
RD128-EPDM	EPDM Rubber Disc Coupon	\$5.10
RD128-GL	Borosilicate Glass Coupon	\$13.00
RD128-GT	Glazed Tile Coupon (porous ceramic substratum, one side glazed tile surface-white)	\$19.80
RD128-HA	Hydroxy Apatite Coupon	\$11.00
RD128-HDPE	High Density Polyethylene Coupon	\$5.50
RD128-HY	Hypalon Rubber Coupon	\$5.10
RD128-LDPE	Low Density Polyethylene Coupon (non-autoclavable)	\$5.50
RD128-Lucitone	Lucitone Dental Plastic Coupon	\$16.00
RD128-Ni	Nickel Coupon	\$9.00
RD128-NR	Natural Rubber Coupon	\$5.10
RD128-Ny	Nylon Coupon	\$5.50
RD128-PC	Polycarbonate Coupon	\$4.80
RD128-PCC	Polycarbonate Cup Coupon	\$6.60
RD128-PE	UMHW Polyethylene Coupon (ultra-high-molecular-weight polyethylene)	\$5.50
RD128-PEEK	Polyetheretherketone (PEEK: Arlon 1330) Coupon	\$6.00
RD128-PET	Polyethylene Terephthalate (PET: Polyester, Dacron) Coupon	\$5.50
RD128-PETG	Polyethylene Terephthalate Glycol (PETG) Coupon (non-autoclavable)	\$5.80
RD128-PG	Plexiglass (acrylic) Coupon (non-autoclavable)	\$5.50
RD128-PL	Porcelain Surface Coupon (porous ceramic substratum, one side glazed porcelain)	\$27.00
RD128-PP	Polypropylene Coupon	\$5.40
RD128-PS	Polystyrene Coupon (non-autoclavable)	\$5.40
RD128-PTFE	Teflon (PTFE) Coupon	\$8.00
RD128-PU	Polyurethane Coupon (high temperature polymer)	\$5.80
RD128-PVC	PVC (white) Coupon (non-autoclavable)	\$5.40
RD128-Si	Silicone Rubber Coupon	\$4.80
RD128-Ti	Titanium Coupon	\$9.80
RD128-Ti6AL	Titanium Alloy (Ti-6AL-4V ELI) Coupon	\$12.80
RD128-Vi	Viton Coupon	\$8.00

ALL PRICING BASED ON PAYMENT TERMS OF NET 30 DAYS.

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