



## **CDC Biofilm Reactor®**

The CDC Biofilm Reactor® consists of eight (8) polypropylene coupon holder rods suspended from a UHMW-polyethylene ported lid. Each coupon holder rod can accommodate three (3) 1/2-inch (12.7 mm) diameter coupons, for a total of twenty-four (24) coupons. The lid (with coupon holders and coupons) is mounted in a 1-liter glass vessel with side-arm discharge port. A liquid growth media or biocide is circulated through the vessel while mixing and shear is generated by a magnetic stir bar and vane rotated by a magnetic stir plate.

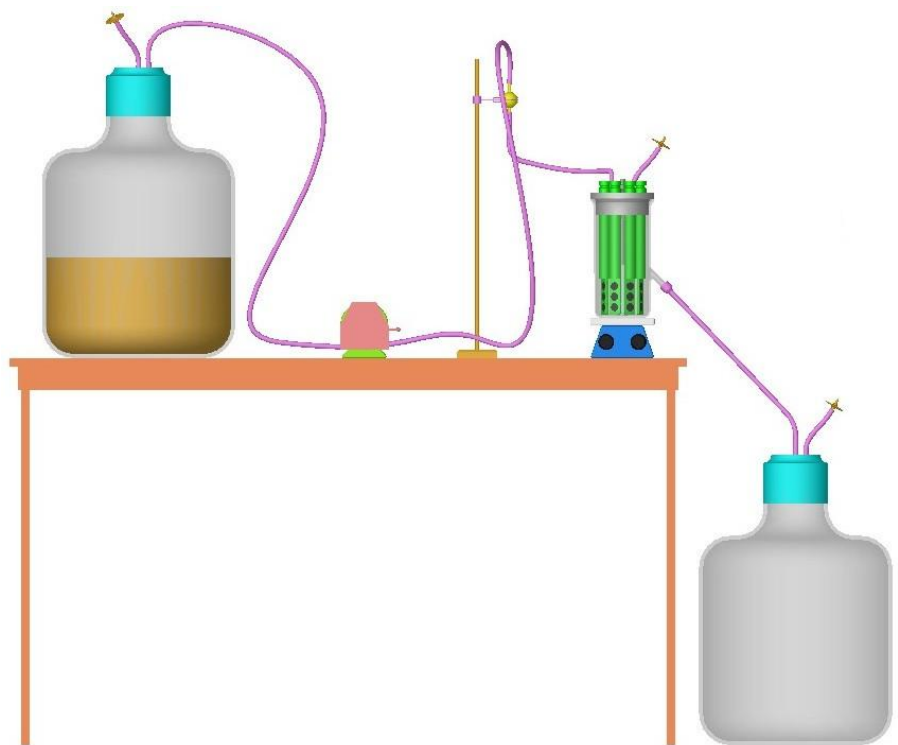
Sampling of the coupons is conducted by aseptically removing individual coupon holder rods with accompanying coupons (3). The coupon holder (or blank) rod is replaced in the lid after sampling to allow the time-course experiment to continue. The coupon removed from the reactor vessel is then used for treatment evaluations, scraped or vortexed to collect the biofilm sample for further study, or imaged using microscopy and image analysis.

The CDC Biofilm Reactor® is completely autoclavable and reusable. The total liquid volume is approximately 350 ml. More than forty (40) 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)



## CDC Biofilm Reactor®

<b>Model CBR 90 - 2 CDC Biofilm Reactor w/o stir plate</b>	<b>\$1,250.00</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, six (6) month limited warranty. Operator's Manual available for digital download.	
<b>Model CBR 90 - 1 CDC Biofilm Reactor System with Standard Stir Plate (115 VAC, CE)</b>	<b>\$2,200.00</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, six (6) month limited warranty. Operator's Manual available for digital download.	
<b>Model CBR 90 - 1 - Int CDC Biofilm Reactor System with Stir Plate (230 VAC, CE)</b>	<b>\$2,200.00</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, six (6) month limited warranty. Operator's Manual available for digital download.	
<b>Model CBR 90 - 1DH CDC Biofilm Reactor System with Digital Stir/Hot Plate (115 VAC, CE)</b>	<b>\$3,400.00</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, six (6) month limited warranty. Operator's Manual available for digital download.	
<b>Model CBR 90 - 1DH - Int. CDC Biofilm Reactor System with Digital Stir/Hot Plate (230 VAC, CE)</b>	<b>\$3,400.00</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, six (6) month limited warranty. Operator's Manual available for digital download.	

ALL PRICING BASED ON PAYMENT TERMS OF NET 30 DAYS.

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## Anaerobic CDC Biofilm Reactor®

<b>Model CBR 90 - 3 Anaerobic/Sealed CDC Biofilm Reactor w/o stir plate</b>	<b>\$1,650.00</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, six (6) month limited warranty. Operator's Manual available for digital download.	
<b>Model CBR 90 - 3SS Anaerobic CDC Biofilm Reactor System with Standard Stir Plate (115 VAC, CE)</b>	<b>\$2,600.00</b>
Includes reactor supports and stir plate (110 - 120 VAC, CE certified), 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, six (6) month limited warranty. Operator's Manual available for digital download.	
<b>Model CBR 90 - 3SS-Int Anaerobic CDC Biofilm Reactor System with Stir Plate (230 VAC, CE)</b>	<b>\$2,600.00</b>
Includes reactor supports and stir plate (230 VAC, CE certified), 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, six (6) month limited warranty. Operator's Manual available for digital download.	
<b>Model CBR 90 - 3DH Anaerobic CDC Biofilm Reactor System with Digital Stir/Hot Plate (115 VAC, CE)</b>	<b>\$3,800.00</b>
Includes reactor supports and digital stir/hot plate with temperature control (110 - 120 VAC, CE certified), 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, six (6) month limited warranty. Operator's Manual available for digital download.	
<b>Model CBR 90 - 3DH - Int Anaerobic CDC Biofilm Reactor System with Digital Stir/Hot Plate (230 VAC, CE)</b>	<b>\$3,800.00</b>
Includes reactor supports and digital stir/hot plate with temperature control (230 VAC, CE certified), 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, six (6) month limited warranty. Operator's Manual available for digital download.	

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## CDC Biofilm Reactor® Components

CBR 2203	<b>CDC Biofilm Reactor Coupon Holder Rod</b> Polypropylene coupon holder rod (holds 3 coupons each)	\$49.00
CBR 2203-MBM	<b>CDC Biofilm Reactor Membrane Holder Rod</b> Polypropylene rod with polypropylene frame to hold membrane samples	\$87.00
CBR 2203-GL	<b>CDC Biofilm Reactor Slide Holder Rod</b> Polypropylene rod to hold 0.70 inch (18 mm) or less wide x 0.063 inch (1.6 mm) thick slides	\$40.00
CBR 2203-PM	<b>CDC Biofilm Reactor Porous Media Holder Rod</b> Polypropylene slide holder rod plus polycarbonate porous media/membrane holder cartridge	\$106.00
CBR 2203B	<b>CDC Biofilm Reactor Coupon Holder Rod Blank</b> Blank polypropylene coupon holder rod (no coupon recesses)	\$41.00
RD 140	<b>1-liter Glass Vessel with Side-Arm Port at 400 ml (nominal)</b>	\$175.00
CBR 2201/2202	<b>Stir Bar / Vane Assembly</b>	\$95.00
CBR 2204	<b>Ported Lid Assembly (includes glass pivot rod and ported lid)</b>	\$306.00
CBR 1969	<b>Glass Pivot Rod</b>	\$22.00
CBR 1969 BF	<b>Glass Pivot Rod and Bulkhead Fitting with Gasket</b>	\$30.00
CBR 9231	<b>Replacement Stainless Steel (316) Set Screw (for CBR 2203, 24/pkg)</b>	\$8.00
CBR 5497	<b>Coupon Removal Tool (Hex Tool)</b>	\$10.00
BST 02915	<b>Bacterial Vent Filter (0.45 um)</b>	\$23.00
CBR 2218-316	<b>Temperature Probe Well and Bulkhead Fitting with Gasket - 316 Stainless</b>	\$54.00
CBR 2218-AI	<b>Temperature Probe Well and Bulkhead Fitting with Gasket - Anodized Aluminum</b>	\$36.00
CBR 2218-Ny	<b>Temperature Probe Well and Bulkhead Fitting with Gasket - Nylon</b> (Does not fit most current stir plate model)	\$32.00
FB 50	<b>Glass Flow Break</b>	\$65.00
CBR 2232	<b>Splash Guard Sampling Tube Insert (for 50 ml sample tube)</b>	\$36.00
CBR 2240	<b>Splash Guard Sampling Tube Insert (for 250 ml sample tube)</b>	\$40.00
CBR 2210	<b>Coupon Manipulation Tool (stainless steel coupon tweezer)</b>	\$80.00

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

Diameter: 12.7mm / 0.50in - Thickness: 3.8mm / 0.15in

<b>RD128-304</b>	Stainless Steel (304L) Disc Coupon	<b>\$8.50</b>
<b>RD128-316</b>	Stainless Steel (316L) Disc Coupon	<b>\$8.50</b>
<b>RD128-316EP</b>	Stainless Steel (316L) Disc Coupon (Electropolished Surface)	<b>\$21.00</b>
<b>RD128-316HP</b>	Stainless Steel (316L) Disc Coupon (Hand Polished Surface)	<b>\$30.00</b>
<b>RD128-347</b>	Stainless Steel (347) Disc Coupon	<b>\$15.00</b>
<b>RD128-ABS</b>	Acrylonitrile Butadiene Styrene (ABS) Disc Coupon (non-autoclavable)	<b>\$9.00</b>
<b>RD128-AL</b>	Aluminum Disc Coupon	<b>\$7.00</b>
<b>RD128-BUNA</b>	Buna-N (AHW White High Grade FC) Rubber Disc Coupon	<b>\$6.00</b>
<b>RD128-CC</b>	Concrete Coated Polycarbonate Disc Coupon (concrete-filled polycarbonate cup)	<b>\$13.00</b>
<b>RD128-CI</b>	Cast Iron Disc Coupon	<b>\$11.00</b>
<b>RD128-CoCr</b>	Cobalt Chrome (Alloy F1537) Disc Coupon	<b>\$49.00</b>
<b>RD128-CPVC</b>	CPVC Disc Coupon	<b>\$7.00</b>
<b>RD128-CS</b>	Carbon (1018 Mild) Steel Disc Coupon	<b>\$8.50</b>
<b>RD128-Cu</b>	Copper (Alloy 101) Disc Coupon	<b>\$10.00</b>
<b>RD128-DI</b>	Ductile Iron Disc Coupon	<b>\$10.00</b>
<b>RD128-EPDM</b>	EPDM Rubber Disc Coupon	<b>\$6.50</b>
<b>RD128-GL</b>	Borosilicate Glass Disc Coupon	<b>\$11.00</b>
<b>RD128-GT</b>	Glazed Tile Disc Coupon (porous ceramic substratum, one side glazed tile surface)	<b>\$30.00</b>
<b>RD128-HA</b>	Hydroxyapatite Disc Coupon	<b>\$16.00</b>
<b>RD128-HDPE</b>	High-Density Polyethylene Disc Coupon	<b>\$7.50</b>
<b>RD128-Inc</b>	Inconel 718 (Nickel Chromium Alloy) Disc Coupon	<b>\$25.00</b>
<b>RD128-LDPE</b>	Low Density Polyethylene Disc Coupon (non-autoclavable)	<b>\$7.50</b>
<b>RD128-Lucitone</b>	Lucitone Dental Plastic Disc Coupon	<b>\$30.00</b>
<b>RD128-Ni</b>	Nickel Disc Coupon	<b>\$19.00</b>
<b>RD128-NR</b>	Natural Rubber Disc Coupon	<b>\$6.50</b>
<b>RD128-Ny</b>	Nylon Disc Coupon	<b>\$7.00</b>
<b>RD128-PC</b>	Polycarbonate Disc Coupon	<b>\$7.00</b>
<b>RD128-PCC</b>	Polycarbonate Cup Disc Coupon	<b>\$10.00</b>
<b>RD128-PE</b>	UHMW Polyethylene Disc Coupon (ultra-high-molecular-weight polyethylene)	<b>\$7.00</b>
<b>RD128-PEEK</b>	Polyether ether ketone (PEEK) Disc Coupon	<b>\$12.00</b>
<b>RD128-PET</b>	Polyethylene Terephthalate (PET) Disc Coupon	<b>\$8.00</b>
<b>RD128-PETG</b>	Polyethylene Terephthalate Glycol (PETG) Disc Coupon (non-autoclavable)	<b>\$8.00</b>
<b>RD128-PG</b>	Plexiglass (acrylic) Disc Coupon (non-autoclavable)	<b>\$8.00</b>
<b>RD128-PL</b>	Porcelain Disc Coupon (porous ceramic substratum, one side glazed porcelain)	<b>\$46.00</b>
<b>RD128-PP</b>	Polypropylene Disc Coupon	<b>\$7.00</b>
<b>RD128-PS</b>	Polystyrene Disc Coupon (non-autoclavable)	<b>\$7.00</b>
<b>RD128-PTFE</b>	Polytetrafluoroethylene (PTFE) Disc Coupon	<b>\$9.00</b>
<b>RD128-PU</b>	Polyurethane Rubber Disc Coupon (non-autoclavable)	<b>\$6.50</b>
<b>RD128-PVC</b>	PVC (White, Type 1) Disc Coupon (non-autoclavable)	<b>\$7.00</b>
<b>RD128-Si</b>	Silicone Rubber Disc Coupon	<b>\$6.50</b>
<b>RD128-Ti</b>	Titanium Disc Coupon	<b>\$16.50</b>
<b>RD128-Ti6AL</b>	Titanium Alloy (Ti-6AL-4V ELI) Disc Coupon	<b>\$17.50</b>
<b>RD128-Vi</b>	Viton Disc Coupon	<b>\$7.00</b>

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## Slide Coupon for the CDC and ISBR Reactors

Width: 15.2mm / 0.6in - Length: 75mm / 3in

<b>CBR 2128-304</b>	304 Stainless Steel Slide Coupon	<b>\$10.00</b>
<b>CBR 2128-316</b>	316 Stainless Steel Slide Coupon	<b>\$10.00</b>
<b>CBR 2128-CS</b>	1018 Carbon (Mild) Steel Slide Coupon	<b>\$10.00</b>
<b>CBR 2128-GL</b>	Borosilicate Glass Slide Coupon	<b>\$15.00</b>
<b>CBR 2128-HDPE</b>	High-Density Polyethylene Slide Coupon	<b>\$8.00</b>
<b>CBR 2128-PC</b>	Polycarbonate Slide Coupon	<b>\$8.00</b>
<b>CBR 2128-PP</b>	Polypropylene Slide Coupon	<b>\$8.00</b>
<b>CBR 2128-PVC</b>	PVC Slide Coupon	<b>\$8.00</b>

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