

**Product Code:** 20-xxxxxx [various] and 02-xxxxxx [various]  
**Product Name:** Virus and Chlamydia Control Stocks  
Virus and Chlamydia Training Panels

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## 1. Information on the Substance/Preparation and Company

### 1.1 Product name: **Virus and Chlamydia Control Stocks**

Catalog #	Control Stock product name:
20-4510130	<i>Echovirus</i>
20-4420010	<i>Coxsackie virus type B</i>
20-4310010	<i>Chlamydia trachomatis</i>
20-4600010	<i>Varicella-zoster virus</i>
20-4700010	Respiratory viruses, seven major*, mixed
20-4710010	<i>Influenza A virus</i>
20-4720010	<i>Influenza B virus</i>
20-4730010	<i>Respiratory Syncytial virus</i>
20-4740010	<i>Adenovirus</i>
20-4750010	<i>Parainfluenza virus type 1</i>
20-4760010	<i>Parainfluenza virus type 2</i>
20-4770010	<i>Parainfluenza virus type 3</i>
20-4780010	<i>Human Metapneumovirus</i>
20-4810020	<i>Herpes simplex virus type 1</i>
20-4820020	<i>Herpes simplex virus type 2</i>
20-4900010	<i>Cytomegalovirus</i>

\*(*influenza A virus, influenza B virus, respiratory syncytial virus, adenovirus, parainfluenza virus types 1, 2 and 3*)

### 1.2 Product name: **Virus and Chlamydia Training Panels**

Catalog #	Training Panel product name:
02-125012	D <sup>3</sup> FastPoint™ L-DFA™ Respiratory Virus
02-431024	<i>Chlamydia</i>
02-440020	Enterovirus
02-461024	H&V ( <i>Herpes simplex, Varicella-zoster, Cytomegalovirus</i> )
02-477020	<i>Respiratory viruses</i>
02-478020	Metapneumovirus
02-491024	<i>Cytomegalovirus</i>
02-480024.v2	<i>Herpes simplex</i>
01-013105.2009H1.P	2009 H1N1 Influenza A Virus Demonstration

1.3 **Company** Diagnostic HYBRIDS, Inc.  
1055 East State Street, Suite 100  
Athens, OH 45701, USA  
(740) 589-3300 or (866) 344-3477

1.4 **In emergencies** Call your local emergency center

## 2. Components and Hazardous Ingredients

Hazardous Ingredients	Classification Substance	EINECS Nr.
Bovine Serum	(none listed)	(unlisted)
Amphotericin B	Xi, R:22-36/37/38; S26	215-742-2
Calcium chloride	Xi, R36; S24	233-140-8
Cyclohexamide	T+, N, Mut.Cat.3, Repr.Cat.2; R:28, 51/53, 61, 68; S:45, 51, 61	200-636-0

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Hazardous Ingredients	Classification Substance	EINECS Nr.
Gentamicin	Xn, R:61, 42/43, 36; S:23, 36/37/39, 45	215-778-9
Penicillin G	Xi, Xn, Resp.Sens.1, SkinSens.1; R:42/43, 36/37; S45	204-038-0
Streptomycin Sulfate	Xn, Acute Tox.4; R:22, 52	223-286-0
L-Cysteine	Xn, Acute Tox. 4; R22	200-158-2
L-Glutamine	Xi, R:36/37/38; S:26, 36	200-292-1
HEPES	Xi, R:36/37/38; S:26, 36	230-907-9
Phenol Red	Xi, R:36/37/38; S:26, 36	205-609-7
Sucrose	(none listed)	200-334-9
Trypsin	Xn, R:36/37/38, 45; S:22-24-26-36/37	232-994-9
[Biological materials]	Biological Risk, R:48, 55, 60, 63; S:36/37/39, 53, 60, 61	[Not applicable]
[Proprietary ingredients]	[Not applicable]	[Not applicable]

Shipping material	Dry Ice (Carbon dioxide, solid)	Ras, RfB	204-696-9
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Classification key: Toxic (T); Very toxic (T+); Harmful (Xn); Irritant (Xi); Dangerous for the environment (N); Oxidizing agent (O); Explosive (E); Flammable (F)  
 Proprietary ingredients: Contains non-hazardous quantities of proprietary ingredients [OSHA Regulations (Standards-29CFR) Hazard Communication-1910.1200(i)(1)].  
 Biological materials: Contains potentially hazardous live viruses and *Chlamydia* from clinical isolates. Product may include one or more of the following: *echovirus*, *coxsackie virus type B*, *Chlamydia trachomatis*, *varicella-zoster virus*, *influenza A virus*, *influenza B virus*, *respiratory syncytial virus*, *adenovirus*, *parainfluenza virus* (types 1, 2 or 3), human *metapneumovirus*, *Herpes simplex virus* (type 1 or 2), *cytomegalovirus*.

Components	Products																								
	20-4510130	20-4420010	20-4310010	20-4600010	20-4700010	20-4710010	20-4720010	20-4730010	20-4740010	20-4750010	20-4760010	20-4770010	20-4780010	20-4810020	20-4820020	20-4900010	02-125012	02-431024	02-440020	02-461024	02-477020	02-478020	02-491024	02-480024.v2	01-013105.2009H1.P
Bovine Serum	X	X	X	X	X									X	X	X		X	X	X				X	
Amphotericin B			X															X							
Calcium chloride																	X								
Cyclohexamide			X															X							
Gentamicin	X	X	X	X	X									X	X	X		X	X	X				X	
Penicillin G					X	X	X	X	X	X	X	X	X								X	X	X		X
Streptomycin Sulfate			X		X	X	X	X	X	X	X	X	X					X			X	X	X		X
L-Cysteine																	X								
L-Glutamine	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
HEPES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
Phenol Red	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sucrose																	X								
Trypsin					X	X	X	X	X	X	X	X	X								X	X	X		X

**3. Hazards Identification**

- Contains non-hazardous quantities of proprietary ingredients [OSHA Regulations (Standards-29CFR) Hazard Communication-1910.1200(i)(1)].
- Contains potentially hazardous biological materials; live viruses and *Chlamydia* from clinical isolates.
- The liquid is an aqueous biological salt- and nutrient-containing medium, which also contains FBS, with one or more antimicrobials (penicillin, streptomycin, gentamicin and/or amphotericin B).
- Bovine Serum may cause eye and skin irritation. May be harmful if inhaled and may be irritating to mucous membranes and upper respiratory tract. May be harmful if swallowed.
- Amphotericin B may cause severe allergic reaction with potentially lethal side effects.
- Cyclohexamide has possible risk of irreversible effects. May cause harm to the unborn child. Very

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toxic if swallowed. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

- Gentamicin may cause harm to the unborn child. May cause sensitization by inhalation and skin contact. Irritating to eyes.
- Penicillin G may cause allergic skin reaction, allergic respiratory reaction, slight irritation to the digestive tract, respiratory tract, eyes, and skin.
- Streptomycin sulfate is very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.
- L-Glutamine may cause allergic skin and/or respiratory reaction. Irritating to eyes, respiratory system, and skin.
- Trypsin may cause skin, eye, and mucous membranes and upper respiratory tract irritation (lung sensitizer).

#### 4. First Aid Measures

- Eye contact:* ▪ Rinse immediately with water for 15 minutes, occasionally lifting the upper and lower eyelids
- Consult a doctor/medical service
- Skin contact:* ▪ Rinse with plenty of water
- Remove clothing before washing
- Consult a doctor/medical service
- After inhalation:* ▪ Remove the victim into fresh air
- Consult a doctor/medical service
- After ingestion:* ▪ Consult a doctor/medical service

#### 5. Fire Fighting Measures

- Suitable extinguishing media:* ▪ All non combustible extinguishing media allowed
- Unsuitable extinguishing media:* ▪ No data available
- Special exposure hazards:* ▪ No data available
- Instructions:* ▪ Take account of contaminated fire fighting water
- Use fire fighting water moderately and contain it
- Special protective equipment for firefighters:* ▪ No data available

#### 6. Accidental Release Measures

- Personal protection:* ▪ See 8.2, below
- Environmental precautions:* ▪ Discharge according to local regulations
- Clean-up:* ▪ Take up liquid spill into absorbent material
- Discharge absorbed material according to local regulations
- Wash clothing and equipment after handling

#### 7. Handling and Storage

- Handling:* ▪ *If solution is spilled:* take up with an absorbent material; if contact is possible, wear gloves as protection.
- Discharge according to local regulations
- Remove and clean contaminated clothing
- Handle and open the container with care
- Storage:* ▪ -70°C or lower
- Keep away from: heat sources
- Additional Reference:* ▪ CDC-NIH Manual, *Biosafety in Microbiological and Biomedical Laboratories* (BMBL), 5<sup>th</sup> edition, 2007, [<http://www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm>]

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8. Exposure Controls/Personal Protection

8.1 Exposure Limits

Chemical/Component	TLV/NIOSH REL	OSHA PEL	CAS No.
Bovine Serum	Not listed	Not listed	Not available
Amphotericin B	Not listed	Not listed	1397-89-3
Calcium chloride	Not listed	Not listed	10043-52-4
Cyclohexamide	Not listed	Not listed	66-81-9
Gentamicin	Not listed	Not listed	113-98-4
Penicillin G	Not listed	Not listed	69-57-8
Streptomycin Sulfate	Not listed	Not listed	3810-74-0
L-Cysteine	Not listed	Not listed	52-90-4
L-Glutamine	Not listed	Not listed	56-85-9
HEPES*	Not listed	Not listed	7365-45-9
Phenol Red	Not listed	Not listed	143-74-8
Sucrose	10 mg/m <sup>3</sup> TWA	15 mg/m <sup>3</sup> TWA	57-50-1
Trypsin	Not listed	Not listed	9087-70-1
Proprietary Ingredients	Not listed	Not listed	Not available
Dry Ice (Carbon dioxide, solid)	TLV: 5000 ppm as TWA	TWA: 5000 ppm 8-hour/hour	124-38-9

*Note:* Information in above table from NIOSH Pocket Guide to Chemical Hazards, 2005.

\* 4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid, N-(2-Hydroxyethyl)piperazine-N'-(2-ethanesulfonic acid)

8.2 Control of Exposure

*Eye protection:* ■ Safety glasses or Face shield

*Hand protection:* ■ Gloves should be waterproof  
■ Suitable materials: Butyl rubber, natural rubber, neoprene, nitrile rubber, polyethylene, PVC  
■ Hands should be washed after working with this product.

*Skin protection:* ■ Protective clothing

*Respiratory protection:* ■ Area ventilation is generally adequate; avoid generation of dusts, mists or other airborne forms when working with the product  
■ Insufficient ventilation: wear respiratory protection

9. Physical and Chemical Properties

Clear, aqueous liquid; cherry-peach to light red-orange in color; odorless.

*Note:* Boiling and Freezing Points for all aqueous components are near those of pure water.

10. Stability and Reactivity

- *Stability:* Hazardous polymerization will not occur. Stable if stored in specified conditions (see labeling).
- *Reactivity/Hazardous decomposition products:* No hazardous decomposition products are formed in high quantities.
- *Conditions/Materials to avoid:* Strong oxidizing agents; also see Section 3. Hazards Identification

11. Toxicological Information

Acute toxicity:

<i>Bovine Serum</i>	None identified	None identified
<i>Amphotericin B</i>	LD <sub>50</sub> oral, rat	>5000 mg/kg
<i>Calcium chloride</i>	LD <sub>50</sub> oral, rat	1000 mg/kg
<i>Cyclohexamide</i>	LD <sub>50</sub> oral, rat	2 mg/kg
<i>Gentamicin</i>	LD <sub>50</sub> oral, rat	>5000 mg/kg

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	LD <sub>50</sub> IV, rat	96 mg/kg
<i>Penicillin G</i>	LD <sub>50</sub> oral, rat	6916 mg/kg
<i>Streptomycin Sulfate</i>	LD <sub>50</sub> oral, rat	430 mg/kg
	LD <sub>50</sub> IP, rat	1219 mg/kg
	LD <sub>50</sub> oral, mouse	430 mg/kg
<i>L-Cysteine</i>	LD <sub>50</sub> oral, rat	1890 mg/kg
<i>L-Glutamine</i>	LD <sub>50</sub> oral, rat	7500 mg/kg
	LD <sub>50</sub> oral, mouse	21700 mg/kg
<i>Phenol Red</i>	None identified	None identified
<i>Sucrose</i>	LD <sub>50</sub> oral, rat	29700 mg/kg
<i>Trypsin</i>	LD <sub>50</sub> oral, rat	>5,000 mg/kg
	LD <sub>50</sub> oral, mouse	1,450 mg/kg

#### Chronic toxicity:

<i>Bovine Serum</i>	Target Organ(s): None identified
<i>Amphotericin B</i>	Target Organ(s): kidneys
<i>Calcium chloride</i>	Target Organ(s): None identified
<i>Cyclohexamide</i>	Target Organ(s): nerves, kidney, adrenal cortex, cardiovascular system
<i>Gentamicin</i>	Target Organ(s): nerves, kidney, ears
<i>Penicillin G</i>	Target Organ(s): nerves, kidney, ears
<i>Streptomycin Sulfate</i>	Target Organ(s): skin, eyes, kidneys, ears
<i>L-Cysteine</i>	Target Organ(s): lungs, respiratory sensitizer, kidney
<i>L-Glutamine</i>	Target Organ(s): None identified
<i>Phenol Red</i>	Target Organ(s): eyes, skin, respiratory system
<i>Sucrose</i>	Target Organ(s): lungs
<i>Trypsin</i>	Target Organ(s): skin, respiratory sensitizer, lungs

*Note:* Toxicity levels listed in the table above are for the ingredients when in their pure state.

#### Routes of exposure

- Ingestion, inhalation, eyes and skin
- Caution! Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals. Causes photosensitivity. Exposure to light can result in allergic reactions resulting in dermatologic lesions, which can vary from sunburn-like response to edematous, vesiculated lesions or bullae.

#### Acute effects/symptoms

*Amphotericin B:* Known to have severe and potentially lethal side effects consisting of high fever, shaking chills, hypotension, anorexia, nausea, vomiting, headache, dyspnea, and tachypnea.

*Cyclohexamide:* May cause congenital malformation in the fetus. Presumed human reproductive toxicant.

*Gentamicin:* May cause skin, eye, and mucous membranes and upper respiratory tract irritation. May be harmful if swallowed.

*Penicillin G and Streptomycin Sulfate:* May cause skin, eye, and mucous membranes and upper respiratory tract irritation. May be harmful if swallowed.

*Trypsin:* May cause skin, eye, and mucous membranes and upper respiratory tract irritation (lung sensitizer).

#### Chronic effects

*Amphotericin B:* Multiple organ damage associated with therapeutic doses with significant nephrotoxicity and/or hepatotoxicity. Several forms of anemia and other blood dyscrasias have been reported.

*Calcium chloride:* Laboratory experiments have shown mutagenic effects.

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**Cyclohexamide:** May cause significant toxic side effects, including DNA damage, teratogenesis, and other reproductive effects (including birth defects and toxicity to sperm).

**Gentamicin:** Aminoglycosides are associated with significant nephrotoxicity and/or ototoxicity. The chemical, physical, and toxicological properties have not been thoroughly investigated.

**Penicillin G and Streptomycin Sulfate:** Aminoglycosides are associated with significant nephrotoxicity and/or ototoxicity. The chemical, physical, and toxicological properties have not been thoroughly investigated.

**Trypsin:** Mutagenic effects: Classified POSSIBLE for human.

## 12. Ecological Information

Aquatic toxicity:

<i>Calcium chloride</i>	LC <sub>50</sub> (96 h):	10,650 mg/L ( <i>Lepomis macrochirus</i> ; bluegill)
	EC <sub>50</sub> (48 h):	52 mg/L ( <i>Daphnia magna</i> ; water flea) Toxic to daphnia and other aquatic invertebrates.
<i>Cyclohexamide:</i>	(not available)	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<i>Streptomycin Sulfate:</i>	LC <sub>50</sub> (96 h):	>180 mg/L ( <i>Oncorhynchus mykiss</i> ; rainbow trout)
	LD <sub>50</sub> (48 h):	650 mg/L ( <i>Daphnia magna</i> ; water flea) Toxic to daphnia and other aquatic invertebrates

Other Information:

- *Effect on the ozone layer:* Not dangerous for the ozone layer (1999/45/EC)
- *Greenhouse effect:* No data available
- *Effect on waste water purification:* No data available

## 13. Waste Disposal Considerations

*Provisions relating to waste:* Hazardous waste (91/689/EEC)

*Packaging/container:* Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10 (packaging containing residues of or contaminated by dangerous substances).


*Disposal methods:* All control stock and training panel components must be considered as hazardous waste. Disposal of these materials, and cultures or other materials exposed to this material, by autoclaving at 121°C for 20 minutes. They should be disposed of following local regulations.

## 14. Transport Information

**USA:** No restrictions. Designate the appropriate UN numbers in the documentation and shipping materials, see list below.



**Canada:** Requires "Permit to import human pathogen(s)"; both PHA (Public Health Agency) and CIFA (Canadian Food Inspection Agency) import permits are required for each shipment; and appropriate UN numbers listed below.

**ROW (other Regions Of World):** [variable, an importation and/or exportation permit may be required; due diligence of local regulations and permits must be confirmed; and appropriate UN numbers accompanying shipping documentation materials]

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
ICAO/IATA regulations	UN3373	Biological substance, Category B (shipping material)	6.2	III		49 CFR (173.199) IATA (3.6.2.2.3.6)






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Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1845	CARBON DIOXIDE, Solid	9	III		No additional remarks.
TDG Classification	UN1845	CARBON DIOXIDE, Solid	9	III		Not available.

15. Regulatory Information

Classification according to directives 67/548/EEC and 1999/45/EC

Symbol	Risk and Safety Precaution
	R22: Harmful if swallowed R28: Very toxic if swallowed R36/37/38: Irritating to eyes, respiratory system and skin R42/43: May cause sensitization by inhalation and skin contact R48: Danger of serious damage to health by prolonged exposure R51/52/53: Toxic/harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment
 T+	R55: Toxic to fauna R60: May impair fertility R61: May cause harm to the unborn child R68: Possible risks of irreversible effects
 Xn – harmful  Xi – irritant	S23: Do not breathe aerosols S24/25: Avoid contact with skin and eyes S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice S29: Do not empty into drains S35: This material and its container must be disposed of in a safe way S36/37/39: Wear suitable protective clothing, gloves and eye/face protection S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)
 N	S53: Avoid exposure - obtain special instruction before use S60: This material and/or its container must be disposed of as hazardous waste S61: Avoid release to the environment. Refer to special instructions safety data sheet

Symbol	Dry Ice (shipping material)
	Ras Asphyxiant in high concentrations RFb May cause frostbite S9 Keep container in well ventilated place S23 Do not breathe the gas S36A Use suitable protective equipment

16. Other Information

- Based on: US 29 CFR 1910:1200(g); Canadian Hazardous Product Act, Part II; Directive 911155/EEC et seq.
- This product is designed for use by professionals.
- The above information is believed to be accurate and represents the information available to date, but Diagnostic Hybrids does not purport it to be all-inclusive; this should be used only as a guide.
- Refer to the Product Insert for this Product for additional details on the proper storage, handling, use, and disposal of the reagents included in this Product.
- Contact Diagnostic Hybrids, Inc. if additional information is required.

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