

avsbio

**2023 Catalog**

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## AVS Bio

Whether you are a vaccine manufacturer or virus researcher, we understand that you require a reliable supply of high-quality, specific-pathogen-free eggs and related avian products and support services. You need confidence that your source will deliver products that are produced under rigid biosecurity and quality control to ensure the best results for your target virus. For more than five decades, AVS Bio has been recognized as a partner you can depend on to consistently support your needs. Our SPF technology provides vaccine manufacturers and researchers the comfort of knowing that the raw materials used in their manufacturing process are free of extraneous agents. As the world's first commercial supplier, we have established flock handling and egg production procedures that set the global industry standard. You can depend on our avian laboratory expertise to continue to develop product lines that offer the highest quality SPF poultry products.

## AVS Bio in Connecticut

### Background

- USDA-licensed facilities
- Two laboratory campuses
- Three chicken facilities
- Newly constructed production suites for FFM products

### Laboratories and Facilities

- Over 16,500 ft<sup>2</sup> of lab and support space
- Over 22,000 ft<sup>2</sup> of housing for bird projects

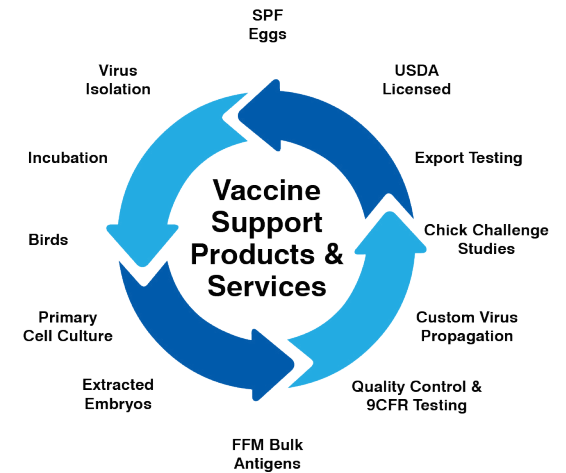
### Staff

- 50+ employees

### Project Experience and Capabilities

- Virus isolation
  - Bulk virus production in eggs and birds autogenous and commercial strains
  - One to 40+ L batch sizes
  - Live or killed
- Bulk bacterial antigen
  - Up to 100 L batch sizes
- Bulk antigen production using expression systems
  - Baculovirus
  - Yeast
  - *E. coli*
- USDA licensing, as needed (FFM)
- Large-scale cell culture production for vaccine manufacturing
  - Chicken embryo fibroblast (CEFs)
  - Chicken embryo kidney cells (CEKCs)
  - Chicken embryo liver cells (CELCs)
- Egg yolk antibody (IgY) using SPF chickens
- 9CFR testing
- Fully integrated Quality Assurance process
- Pathogens (material)
  - Infectious bronchitis (MASS) (allantoic fluid)
  - Newcastle disease virus (allantoic fluid)

- Infectious bursal disease (allantoic fluid and bursal-derived)
- Salmonella (whole culture)
- Avian reovirus (tissue culture)
- Others, upon request (fully customizable)





## Ordering Information

All sales are subject to the following terms and conditions of sales. [Terms and Conditions](#)

There is a minimum order charge of \$70 for all products and testing services, excluding shipping and handling.

**Charges:** All prices are CPT Shipping Point, exclusive of shipping and handling charges.

AVS Bio  
1 Wisconsin Avenue, Suite 100  
Norwich, CT 06360, USA  
USA Toll Free Phone: 800 772 3271  
Phone: 860 889 1389  
Fax: 860 889 1991

### [E-mail](#)

**Wire Transfer:** JP Morgan, New York, NY, USA,  
DDA Account #799-761499, ABA# 021000021,  
SWIFT #CHASUS33

**Checks:** Please mail to Charles River  
Laboratories, G.P.O. Box 27812, New York, NY  
10087-7812

**Online Ordering:** Visit our website to learn about  
options for online ordering.

For more information or to obtain technical  
documentation, please visit our website at  
[avsbio.com](https://avsbio.com)





# Mycoplasma, Pullorum Plate Antigens, & Control Sera



## USDA Licensed Plate Antigens

Killed and Stained Antigens for the Plate Agglutination Test  
Do Not Freeze / Store between 2-7 °C.

	Material #	Price
Mycoplasma Gallisepticum Antigen SPAFAS MG Plate Antigen (10 ml per vial-250 Tests)	10100760	\$43.05/vial
Mycoplasma Meleagridis Antigen SPAFAS MM Plate Antigen (10 ml per vial-250 Tests)	10100825	\$242.90/vial
Mycoplasma Synoviae Antigen SPAFAS MS Plate Antigen (10 ml per vial-250 Tests)	10100761	\$119.35/vial
Pullorum Antigen - Stained Antigen Polyvalent (14 ml per vial-350 Tests)	10102217	\$77.60/vial
Pullorum Antigen - Stained Antigen Polyvalent (40 ml per vial-1000 Tests)	10105346	\$145.90/vial
Pullorum Loop or Dropper Tip	19000002	\$4.95/each

## Serum Plate Antiserum/Antibody

1 ml per vial (liquid) Store at 4 °C.

	Material #	Price
Mycoplasma Gallisepticum	10100703	\$81.35/ml
Mycoplasma Meleagridis	10100708	\$81.35/ml
Mycoplasma Synoviae	10100706	\$81.35/ml
Salmonella Polyvalent (Groups B & D)	10100702	\$81.35/ml
Negative SPA	10100511	\$81.35/ml



# Chicken Cell Products



## Chicken Cell Products

These cells are prepared and shipped fresh each day per order. We use our own SPF chicken embryos and media containing irradiated serum from negligible risk BSE countries. We offer three quality groups of cells like our SPF eggs: standard, CAV negative, and CAV negative group specific (GS) antigen free cells which are C/O and not resistant to any of the Avian Leukosis Virus subgroups. For best results, use immediately upon receipt. Custom bulk orders for vaccine production are available upon request.

### Primary Chicken Embryo Cells

400 million cells or greater per 50 ml vial. Store between 2–7 °C.

Standard Cells	Material #	Price
Fibroblasts	10100795	\$504.75
Kidney Cells	10100797	\$551.60

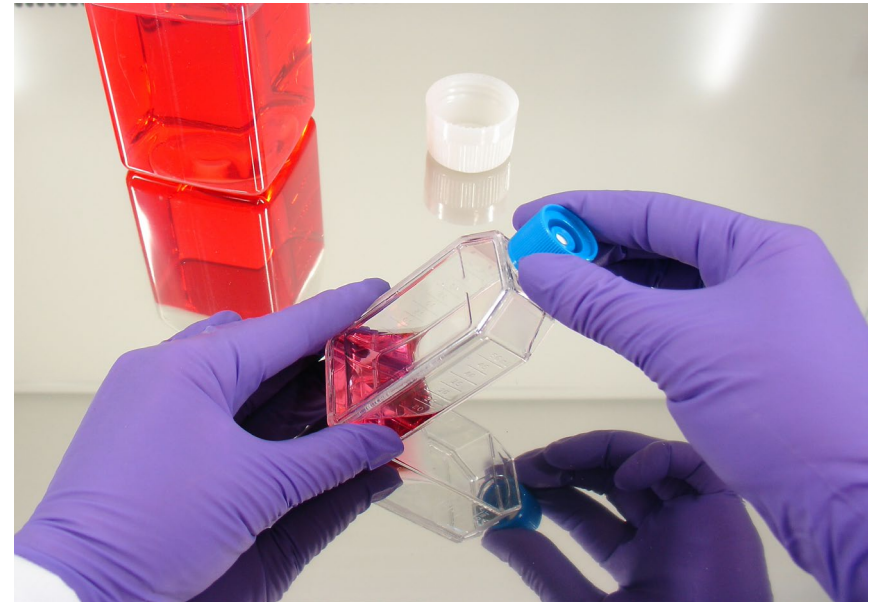
#### CAV Negative Cells

(Flock Source is CAV Negative)

CAV Negative Cells	Material #	Price
Fibroblasts	10100807	\$598.75
Kidney Cells	10100810	\$641.80
Dermal Cells*	10100803	\$837.65

\*1 billion cells or greater per 125 ml vial. Requires a two-week notice prior to ship date.

CAV Negative GS Antigen Free Cells	Material #	Price
Fibroblasts	10100808	\$662.40
Kidney Cells	10100811	\$723.65
Liver Cells	10100814	\$723.65



### Tissue Culture Media

Basal Medium Eagles (BME) containing irradiated fetal calf serum and or newborn calf serum sourced from negligible risk BSE countries.

Media Type	Material #	Per 1 L (2 x 500 ML)
2.5% (2.5% FCS; for use with CEF)	10100802	\$116.75
5% (1% FCS & 4% NB; for use with CEF)	10100799	\$162.55
8% (2% FCS & 6% NB; for use with CEK & CEL)	10100801	\$178.50





## Chicken Blood & Spotted Slides



## Chicken Blood Products

Blood products are prepared from SPF Chickens. They are processed and shipped on Mondays and must be ordered by the previous Wednesday at noon EST.

	Material #	Per Vial
Chicken Red Blood Cells (5 ml packed red blood cells in Alsevers - Normally 5 day-old chicks)	10100767	\$425.50
Adult Red Blood Cells (5 ml packed red blood cells in Alsevers)	10100769	\$324.40
Adult Chicken Whole Blood (10 ml whole blood in Alsevers)	10100768	\$211.55

## Spotted Slides

12 spots per slide fixed in and inactivated with acetone. Store at -20 °C.

		Material #	Each
Slide: 12 spots per slide	Avian Nephritis Virus	10102766	\$47.60
	Chicken Anemia Virus	10102767	\$32.45
Positive Control Sera: 1 ml lyophilized	Avian Nephritis Virus	10102768	\$91.35
	Chicken Anemia Virus	10100498	\$91.35
Negative Control Sera: 1 ml lyophilized		10100380	\$86.90



# Avian Antisera



Store liquid and lyophilized antisera at -20 °C. All antisera are heat inactivated.

**Liquid product available in the USA only.**

	1 mi	5 mi	10 mi	50 mi	100 mi
	\$91.35	\$316.25	\$460.30	\$1282.30	\$1987.30
<b>Avian Adenovirus Group 1 Type 1 (Fowl Adenovirus A; FadV-1)</b>					
Liquid	10100512	10100513	10100514	10100515	10100516
Lyophilized	10100384	10100385	10100386	10100387	N/A
<b>Avian Adenovirus Group 1 Type 3 (Fowl Adenovirus D; FadV-3)</b>					
Liquid	10100522	N/A	N/A	N/A	N/A
Lyophilized	10100392	N/A	N/A	N/A	N/A
<b>Avian Adenovirus Group 1 Type 5 (Fowl Adenovirus B; FadV-5)</b>					
Liquid	10100527	N/A	N/A	N/A	N/A
Lyophilized	10100396	N/A	N/A	N/A	N/A
<b>Avian Adenovirus Group II (HEV)</b>					
Liquid	10100575	10100576	10100577	10100578	10100579
Lyophilized	10100434	10100435	10100436	10100437	N/A
<b>Avian Encephalomyelitis</b>					
Liquid	10100532	10100533	10100534	10100535	10100536
Lyophilized	10100400	10100401	10100402	10100403	N/A
<b>Avian Influenza (T/W/66) – H9N2</b>					
Liquid	10100537	10100538	10100539	10100540	10100541
Lyophilized	10100404	10100405	10100406	10100407	N/A
<b>Avian Influenza (H5N2)</b>					
Liquid	10101657	10101658	10101659	10101660	10101661
Lyophilized	10101644	10101653	10101654	10101656	N/A
<b>Avian Leukosis Subgroup J</b>					
Liquid	10100580	10100581	10100582	10100583	10100584
Lyophilized	10100438	10100439	10100440	10100441	N/A
<b>Avian Leukosis RSV-A</b>					
Liquid	10100542	10100543	10100544	N/A	N/A
Lyophilized	10100408	10100409	10100410	N/A	N/A
<b>Avian Leukosis RSV-B</b>					
Liquid	10100564	10100565	10100566	N/A	N/A
Lyophilized	10100426	10100427	10100428	N/A	N/A
<b>Avian Nephritis Virus</b>					
Liquid	N/A	N/A	N/A	N/A	N/A
Lyophilized	10102768	10102769	N/A	N/A	N/A
<b>Avian Paramyxovirus Type 2</b>					
Liquid	10100547	10100548	10100549	10100550	10100551
Lyophilized	10100412	10100413	10100414	10100415	N/A

	1 mi	5 mi	10 mi	50 mi	100 mi
	\$91.35	\$316.25	\$460.30	\$1282.30	\$1987.30
<b>Avian Paramyxovirus Type 3</b>					
Liquid	10100552	10100553	10100554	10100555	10100556
Lyophilized	10100416	10100417	10100418	10100419	N/A
<b>Avian Pneumovirus</b>					
Liquid	10100557	10100558	N/A	N/A	N/A
Lyophilized	10100420	10100421	N/A	N/A	N/A
<b>Avian Reovirus</b>					
Liquid	10100559	10100560	10100561	10100562	10100563
Lyophilized	10100422	10100423	10100424	10100425	N/A
<b>Avian Rotavirus</b>					
Liquid	10100517	10100518	10100519	10100520	10100521
Lyophilized	10100388	10100389	10100390	10100391	N/A
<b>Chicken Anemia Virus</b>					
Liquid	10100658	10100659	10100660	10100661	10100662
Lyophilized	10100498	10100499	10100500	10100501	N/A
<b>Fowl Pox</b>					
Liquid	10100569	10100570	10100571	10100572	10100573
Lyophilized	10100430	10100431	10100432	10100433	N/A
<b>Infectious Bronchitis (Ark.)</b>					
Liquid	10100585	10100586	10100587	10100588	10100589
Lyophilized	10100442	10100443	10100444	10100445	N/A
<b>Infectious Bronchitis (Conn.)</b>					
Liquid	10100590	10100591	10100592	10100593	10100594
Lyophilized	10100446	10100447	10100448	10100449	N/A
<b>Infectious Bronchitis (DE-072)</b>					
Liquid	10100605	10100606	10100607	10100608	10100609
Lyophilized	10100458	10100459	10100460	10100461	N/A
<b>Infectious Bronchitis (JMK)</b>					
Liquid	10100595	10100596	10100597	10100598	10100599
Lyophilized	10100450	10100451	10100452	10100453	N/A
<b>Infectious Bronchitis (Mass.)</b>					
Liquid	10100600	10100601	10100602	10100603	10100604
Lyophilized	10100454	10100455	10100456	10100457	N/A
<b>Infectious Bursal Disease (Standard)</b>					
Liquid	10100610	10100611	10100612	10100613	10100614
Lyophilized	10100462	10100463	10100464	10100465	N/A
<b>Infectious Bursal Disease (Variant E)</b>					
Liquid	10100617	10100618	10100619	10100620	10100621
Lyophilized	10100466	10100467	10100468	10100469	N/A



	1 mi	5 mi	10 mi	50 mi	100 mi
	\$91.35	\$316.25	\$460.30	\$1282.30	\$1987.30
<b>Infectious Laryngotracheitis</b>					
Liquid	10100622	10100623	10100624	10100625	10100626
Lyophilized	10100470	10100471	10100472	10100473	N/A
<b>Marek's Disease</b>					
Liquid	10100627	10100628	10100629	10100630	10100631
Lyophilized	10100474	10100475	10100476	10100477	N/A
<b>Mycoplasma Gallisepticum</b>					
Liquid	10100632	10100633	10100634	10100635	10100636
Lyophilized	10100478	10100479	10100480	10100481	N/A
<b>Mycoplasma Synoviae</b>					
Liquid	10100637	10100638	10100639	10100640	10100641
Lyophilized	10100482	10100483	10100484	10100485	N/A
<b>Newcastle Disease</b>					
Liquid	10100642	10100643	10100644	10100645	10100646
Lyophilized	10100486	10100487	10100488	10100489	N/A
<b>Reticuloendotheliosis</b>					
Liquid	10100653	10100654	10100655	10100656	10100657
Lyophilized	10100494	10100495	10100496	10100497	N/A



## Miscellaneous Antiserum/Antibody



## Negative Serum

Sterile chicken serum negative for pathogens as per European Pharmacopeia. All anti-sera are heat inactivated.

Negative Serum	1 mi	5 mi	10 mi	50 mi	100 mi
Liquid	10100506	10100507	10100508	10100509	10100510
Lyophilized	10100380	10100381	10100382	10100383	N/A

## Polyclonal Antibody

Avian Adenovirus Group III (EDS)	Material #	Price
Liquid 1 ml	10100776	\$91.35/ml
Lyophilized 1 ml	10100775	\$91.35/ml



# Avian Antigens





Lyophilized antigens should be stored at -20 °C. Please ask our Customer Service representatives about storage temperatures for liquid antigens. Some products require dry ice for shipping and additional charges may apply. Antigens are sold in 1 ml aliquots.

**Liquid product available in the USA only.**

Agent	Strain	Material	Material # Liquid	Material # Lyophilized	Price
Avian Adenovirus Group I (specify Serotype)	Serotypes 1-12*	TC	N/A	10100668	\$106.00/ml
Avian Adenovirus Group I Type 1*	CELO-Phelps	AF	10100717	10100669	\$106.00/ml
Adenovirus Group I Type 1*	CELO-Phelps	AC	10100718	10100670	\$143.75/ml
Avian Adenovirus Group II (HEV)	Domermuth	SPH	10100732	10100685	\$186.15/ml
Avian Adenovirus Group III (EDS-76)	CLKK115D	AF/I	10100720	10100672	\$127.15/ml
Avian Encephalomyelitis	van Roekel	BH	10100722	10100674	\$106.00/ml
Avian Encephalomyelitis	van Roekel	AC	10100721	10100673	\$389.85/ml
Avian Influenza Type A (H9N2)	Turkey/Wis/66	AF	10100723	10100676	\$106.00/ml
Avian Influenza Type A	Turkey/Wis/66	CAMH/I	10100724	10100677	\$143.75/ml
Avian Influenza Type A (H9N2)	Turkey/Wis/66	AF/I	N/A	10100675	\$110.40/ml
Avian Leukosis - Subgroup J	Hc-1	TC	10100727	10100680	\$106.00/ml
Avian Paramyxovirus Type 2	Yucaipa	AF	10100755	10100713	\$106.00/ml
Avian Paramyxovirus Type 3	61/PMV/Wis/68	AF	10100754	10100712	\$106.00/ml
Avian Reovirus	S1133	CAMH	10100728	10100681	\$143.75/ml
Avian Reovirus	S1133	TC	10100729	10100682	\$106.00/ml
Avian Rotavirus	Ch-2	AC	10100719	10100671	\$203.85/ml
Chicken Anemia Virus	CL-1	TC	10100758	10100716	\$106.00/ml
Fowl Pox	Connecticut	CAMH	10100731	10100684	\$143.75/ml
Infectious Bronchitis	Arkansas 99	AC/I	10100733	10100686	\$133.75/ml
Infectious Bronchitis	Arkansas	AF	10100735	10100688	\$106.00/ml
Infectious Bronchitis	Beaudette (Massachusetts)	AF	10100734	10100687	\$106.00/ml
Infectious Bronchitis	Connecticut A5968	AF	10100736	10100689	\$106.00/ml
Infectious Bronchitis	Connecticut A5968	AC/I	10100737	10100690	\$133.75/ml
Infectious Bronchitis	DE-072	AC/I	10100741	10100694	\$133.75/ml
Infectious Bronchitis	DE-072	AF	10100742	10100695	\$106.00/ml
Infectious Bronchitis	JMK	AC/I	10100738	10100691	\$133.75/ml
Infectious Bronchitis	JMK	AF	10100740	10100693	\$106.00/ml
Infectious Bronchitis	Massachusetts 66579	AC/I	10100739	10100692	\$133.75/ml
Infectious Bursal Disease, Serotype 1	M4040 (2512)	BURH	10100745	10100698	\$196.05/ml



Agent	Strain	Material	Material # Liquid	Material # Lyophilized	Price
Infectious Bursal Disease, Serotype 1	M4040 (2512)	AF	10100743	10100696	\$106.00/ml
Infectious Bursal Disease, Serotype 1	M4040 (2512)	TC	10100744	10100697	\$106.00/ml
Infectious Laryngotracheitis	Cover	AF	10100746	10100699	\$106.00/ml
Infectious Laryngotracheitis	Cover	AC	10100747	10100700	\$143.75/ml
Marek's Disease	SB-1	AC	10100748	10100701	\$203.85/ml
Mycoplasma Gallisepticum**	A5969	WO	10100749	10100704	\$112.55/ml
Mycoplasma Synoviae**	WVU1853	WO	10100750	10100707	\$208.20/ml
Newcastle Disease	LaSota	AC/I	10100753	10100711	\$143.75/ml
Newcastle Disease	LaSota	AF/I	10100751	10100709	\$110.40/ml
Reticuloendotheliosis	T	TC	10100757	10100715	\$106.00/ml
Reticuloendotheliosis	T	AC	10100756	10100714	\$203.85/ml
Rous Sarcoma Virus A	RSV(RAV)-A	TC	10100725	10100678	\$106.00/ml
Rous Sarcoma Virus B	RSV(RAV)-B	TC	10100726	10100679	\$106.00/ml

\*American Association of Avian Pathologists

\*\*Restoring Buffer (30% glycerin) supplied at no additional charge when purchasing MG or MS antigen. Material #10100705 for \$16.90/ml if sold separately.

AC = Antigen Concentrate

TC = Tissue Culture

BURH = Bursal Homogenate

CAMH = Chorio-allantoic Membrane Homogenate

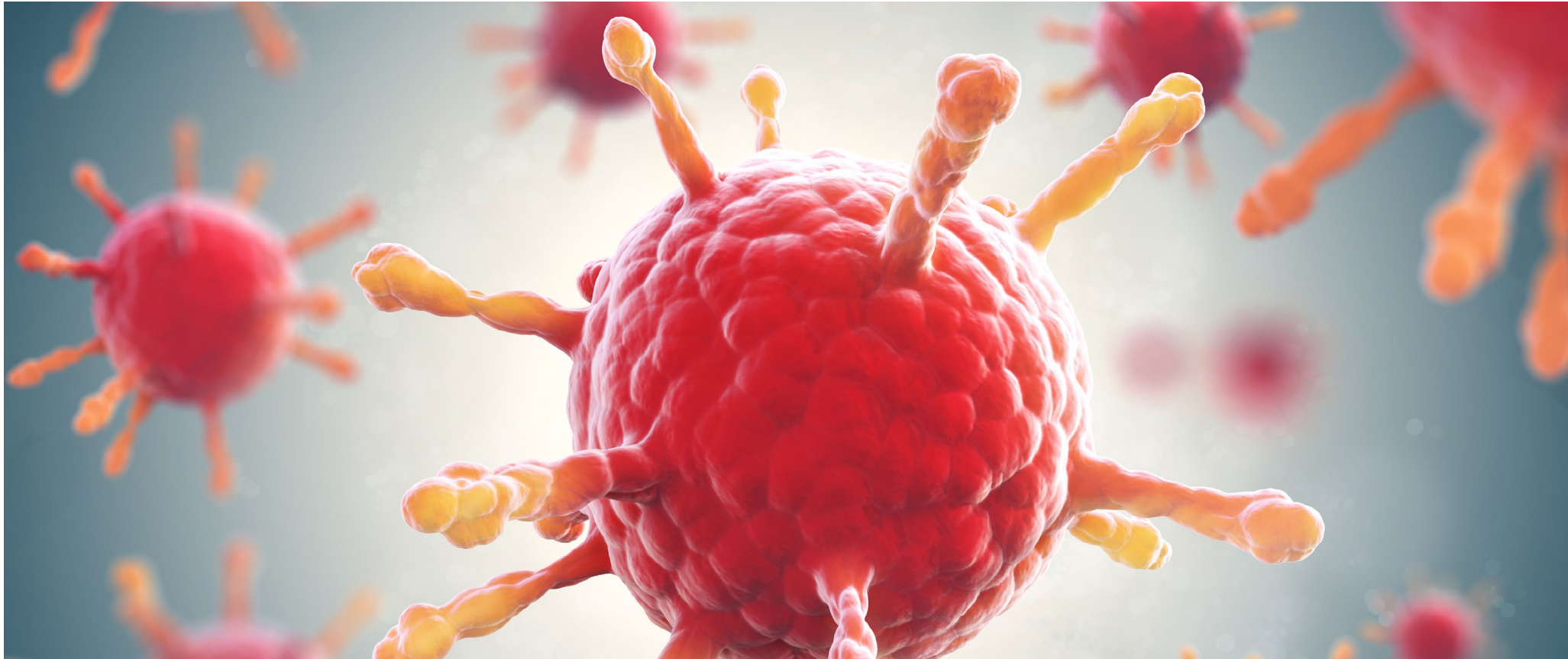
BH = Brain Homogenate

WO = Whole Organism

AF = Allantoic Fluid

I = Inactivated

SPH = Spleen Homogenate



## Human Influenza Virus & Sendai Virus



## Human Influenza Virus

Influenza viruses are supplied as allantoic fluid, gradient purified, HA solublized, and concentrates. The following BSL-2 strains are currently available and are tested for HA and EID50 titers. For best stability, store these at or below -70 °C. Customer supplied seeds may also be submitted for propagation provided that they are bio-safety level 1 and 2 virus strains.

	Purified 1ml (2 mg/ml) Material # / Price	Purified & Inactivated 1 ml (2mg/ml) Material # / Price	Allantoic Fluid 1 ml Material # / Price
Influenza A/PR/8/34 (H1N1)	10100374 / \$1785.00	10100782 / \$4200.00	10100781 / \$240.25
Influenza A X-31, A/Aichi/68 (H3N2)	10100375 / \$1785.00	10100784 / \$4200.00	10100783 / \$240.25
Influenza A/Victoria/3/75 (H3N2)	10100376 / \$1785.00	N/A	10100785 / \$240.25
Influenza A/Hong Kong/8/68 (H3N2)	10100378 / \$1785.00	N/A	10100787 / \$240.25
Influenza B/Lee/40	10100379 / \$1785.00	N/A	10100788 / \$240.25

For more information on our process, view our [Influenza Virus Preparations](#) tech sheet.

## Human Influenza Avian Antisera

Store liquid and lyophilized antisera at -20 °C. All antisera are heat inactivated.  
**Liquid product available in the USA only.**

	1 mi \$91.35	5 mi \$316.25	10 mi \$460.30	50 mi \$1282.30	100 mi \$1987.30
<b>Influenza A/PR/8/34</b>					
Liquid	10100663	10100664	10100665	10100666	10100667
Lyophilized	10100502	10100503	10100504	10100505	N/A



## Sendai Virus

Sendai virus (Cantell Strain) supplied as sterile, clarified allantoic fluid. These products ship on dry ice. For best stability, store these at or below -70 °C. Minimum titers of 2000 HA units/ml and 8.0 log<sub>10</sub> EID<sub>50</sub>/ml.

Size	Material #	Price
1 ml	10100816	\$202.55
100 ml	10100774	\$627.75
400 ml	10100773	\$954.65
800 ml	10100772	\$1580.05

## Sendai Virus (Cantell Strain) Supplied as Sucrose Gradient Purified @ 2 mg/ml

Size	Material #	Price
Sendai Cantell Purified Antigen 1 ml (Liquid)	10100823	\$449.10

## Sendai Avian Antisera

Store liquid and lyophilized antisera at -20 °C. All antisera are heat inactivated.

**Liquid product available in the USA only.**

	1 mi	5 mi	10 mi	50 mi	100 mi
	<b>\$91.35</b>	<b>\$316.25</b>	<b>\$460.30</b>	<b>\$1282.30</b>	<b>\$1987.30</b>
<b>Sendai</b>					
Liquid	10100648	10100649	10100650	10100651	10100652
Lyophilized	10100490	10100491	10100492	10100493	N/A



## Avian Testing Services



## Multiplexed Fluorometric Immunoassay® (MFIA®) Tests

(Provide 0.05 ml serum per sample) Testing will be performed on individual chicken serum samples.

	Test #	Price
14 Panel MFIA® Test (HEV, AE, ANV, PMV-2, Reo, F. Pox, IBV, IBDV, ALV-A, ALV-B, ALV-J, NDV, AI, & ILT)	15100327	\$29.05
22 Panel MFIA® Test (14 panel and Adeno Grp I, Adeno Grp III, Rota, MD, Rev, MG, MS, & Salmonella Pullorum-Gallinarum)	15100329	\$36.40
Single Plex - Individual analytes as listed above	Call for more info	\$16.60

MFIA® testing can only be performed on SPF and research flocks. Call for more information.

## Serum Plate Agglutination Tests

(Provide 0.1 ml serum per test)

	Test #	Price Per Sample
Mycoplasma Gallisepticum	15100012	\$4.05
Mycoplasma Synoviae	15100013	\$5.05
Salmonella Pullorum-Gallinarum	15100016	\$5.05

## HA-HI Tests

(Provide 0.025 ml serum per test)

	Test #	Price Per Sample 1-20	Price Per Sample 21+
Adenovirus Group III (EDS 76)	15100019	\$13.40	\$12.10
Avian Influenza Type A	15100020	\$13.40	\$12.10
Avian Paramyxovirus Type 2	15100029	\$13.40	\$12.10
Avian Paramyxovirus Type 3	15100030	\$13.40	\$12.10
Human Influenza A/PR/8/34	15100098	\$18.70	\$12.10
Infectious Bronchitis (Ark.)	15100021	\$13.40	\$12.10
Infectious Bronchitis (Conn.)	15100022	\$13.40	\$12.10
Infectious Bronchitis (DE-072)	15100025	\$13.40	\$12.10
Infectious Bronchitis (JMK)	15100023	\$13.40	\$12.10
Infectious Bronchitis (Mass.)	15100024	\$13.40	\$12.10
Mycoplasma Gallisepticum	15100026	\$13.40	\$12.10
Mycoplasma Synoviae	15100027	\$13.40	\$12.10
Newcastle Disease	15100028	\$13.40	\$12.10

## Serum Neutralization Tests (in SPF Eggs)

9CFR 113.300 (c)(2) (Provide 2.0 ml serum per SN test)

	Test #	Price Per Sample
Avian Adenovirus (CELO-Phelps)	15100032	\$108.15
Avian Encephalomyelitis	15100033	\$108.15
Infectious Bronchitis (Ark.)	15100034	\$108.15
Infectious Bronchitis (Conn.)	15100035	\$108.15
Infectious Bronchitis (JMK)	15100036	\$108.15
Infectious Bronchitis (Mass.)	15100037	\$108.15
Infectious Bursal Disease (Gumboro)	15100038	\$108.15
Infectious Bursal Disease (Variant E)	15100039	\$108.15
Infectious Laryngotracheitis	15100040	\$108.15
Newcastle Disease	15100041	\$108.15



## Microneutralization Tests

(Provide 0.25 ml serum per test)

	Test #	Price Per Sample
Avian Adenovirus (each sample tested individually for 12 serotypes)	15100056	\$179.55
Avian Reovirus	15100057	\$111.00
RSV-A	15100083	\$111.00
RSV-B	15100084	\$111.00
Avian Leukosis Subgroup J	15100085	\$111.00

## Agar Gel Precipitin Tests

(Provide 0.050 ml serum per test)

	Test #	Price Per Sample 1-5	Price Per Sample 6+
Avian Adenovirus Group I	15100042	\$8.55	\$6.45
Avian Adenovirus Group II (HEV)	15100048	\$8.55	\$6.45
Avian Encephalomyelitis	15100043	\$8.55	\$6.45
Avian Reovirus (Viral Arthritis)	15100045	\$8.55	\$6.45
Avian Rotavirus	15100046	\$8.55	\$6.45
Fowl Pox	15100047	\$8.55	\$6.45
Infectious Bursal Disease (Gumboro)	15100050	\$8.55	\$6.45
Infectious Bursal Disease Sero Type 2	15100052	\$8.55	\$6.45
Infectious Laryngotracheitis	15100051	\$8.55	\$6.45
Influenza	15100044	\$8.55	\$6.45
Marek's Disease	15100053	\$8.55	\$6.45
Newcastle Disease	15100054	\$8.55	\$6.45
Reticuloendotheliosis	15100055	\$8.55	\$6.45

## IFA Testing

(Provide 0.1 ml per serum sample. Chicken sera only.)

	Test #	Price Per Sample
Chicken Anemia Virus	15100075	\$10.30
Avian Nephritis Virus	15100078	\$19.60
Avian Reovirus	15100080	\$19.60
Reticuloendotheliosis Virus	15100081	\$19.60

## 9CFR Testing

(Provide quantities and volumes as listed below and in the appropriate 9CFR)

9CFR #	Description	Test #	Price
113.26	Detection of Viable Bacteria and Fungi Except in Live Vaccine *	15100071	\$401.40
113.27	Detection of Extraneous Viable Bacteria and Fungi in Live Vaccine (10 x 0.5 ml)	15100070	\$401.40
113.28	Detection of Mycoplasma Contamination (1.5 ml)	15100072	\$856.20
113.30	Detection of Salmonella Contamination (2.5 ml of cells or 11 ml of virus)	15100073	\$333.15
113.31	Detection of Avian Lymphoid Leukosis (A p27 ELISA is performed in place of CF) (5 ml of cells or 1 ml of virus with 1 ml of antiserum)	15100059	\$661.65
113.34	Detection of Hemagglutinating Viruses (2.5 ml)	15100067	\$588.25
113.37	Detection of Pathogens by the Chicken Embryo Inoculation Test **	15100068	\$490.10
113.46	Detection of Cytopathogenic and/or Hemadsorbing Agents (2.5 ml)***	15100069	\$606.10

\* Each final product serial: 10 x 2.5 ml. Cells & cell lines and ingredients of animal origin: 1 x 22 ml.  
 \*\* 5 ml of cells or 1 ml of virus with 10 ml of antiserum.  
 \*\*\* Prior to sample submission, confirm with the USDA-CVB any required cell maintenance period.  
 A 21 day cell maintenance period, for example, requires 2 vials of cells and 1 L of media, at a cost of \$477.75.





## PCR Tests

**Gel-Based PCR** – Price based on up to 10 samples. (Provide 0.50 ml per sample)

Agent	Test #	Price
Chicken Anemia Virus	15100076	\$751.50
Mycoplasma synoviae and gallisepticum	15100061	\$1436.80
Reticuloendotheliosis (REV)	15100062	\$958.20

**Endpoint and Real-time PCR** – (Cloacal swabs, allantoic fluid (300 ul) or other samples upon request)

Agent	Test #	Extraction Cost with 1 PCR Test
Avian Adenovirus Group I, Serotypes 1–12	15100099	\$94.85
Avian Adenovirus Group III (EDS)	15100309	\$87.15
Avian Encephalomyelitis	15100101	\$103.35
Avian Influenza Type A	15101007	\$103.35
Avian Reovirus	15100105	\$103.35
Avian Leukosis Subgroup A	15100102	\$103.35
Avian Leukosis Subgroup B	15100103	\$103.35
Avian Leukosis Subgroup J	15100104	\$103.35
Chicken Anemia Virus (Minimum of 10 samples)	15100106	\$103.35
Chicken Parvovirus	15101008	\$103.35
Mycoplasma synoviae and gallisepticum	15100107	\$87.15
Reticuloendotheliosis	15100108	\$103.35
Salmonella pullorum	15100109	\$87.15
West Nile Virus (GMP only)	15101009	Call for a quote
Additional PCR pathogens tested per sample	15100063	\$19.05 for CAV \$15.85 for all others

*Additional GMP testing is available upon request. Call for more details.*

## ELISA

**Antibody Detection** (Provide 0.1 ml chicken serum per test)

**There is a 30 sample minimum per pathogen for ELISA testing.**

	Test #	Price Per Sample
Avian Encephalomyelitis	15100003	\$8.95
Avian Influenza	15100004	\$8.95
Avian Reovirus	15100006	\$8.95
Avian Rhinotracheitis Virus	15100007	\$14.65
Chicken Anemia Virus	15100008	\$12.20
Chicken Parvovirus	15101011	\$5.60
Infectious Bronchitis	15100009	\$8.95
Infectious Bursal Disease	15100010	\$8.95
Infectious Laryngotracheitis	15100011	\$8.95
Newcastle Disease	15100014	\$8.95

**Antigen Detection** (Provide cloacal swabs, albumen, or 0.5 ml of supernatant from passaged CEF's)

	Test #	Price Per Sample
Avian Leukosis (p27 antigen detection)	15100005	\$5.60

## Other Tests

(Provide 1.0 ml per sample)

	Test #	Price Per Sample
COFAL (10 day test - A p27 ELISA is performed in place of CF)	15100060	\$312.00
Salmonella pullorum microtiter	15100017	\$13.90
Virus Titration	15100065	\$124.25
Virus Isolations	15100066	Call for quote
Vaccine Safety/Potency	15101012	Call for quote



## IgY – Egg Yolk Antibodies



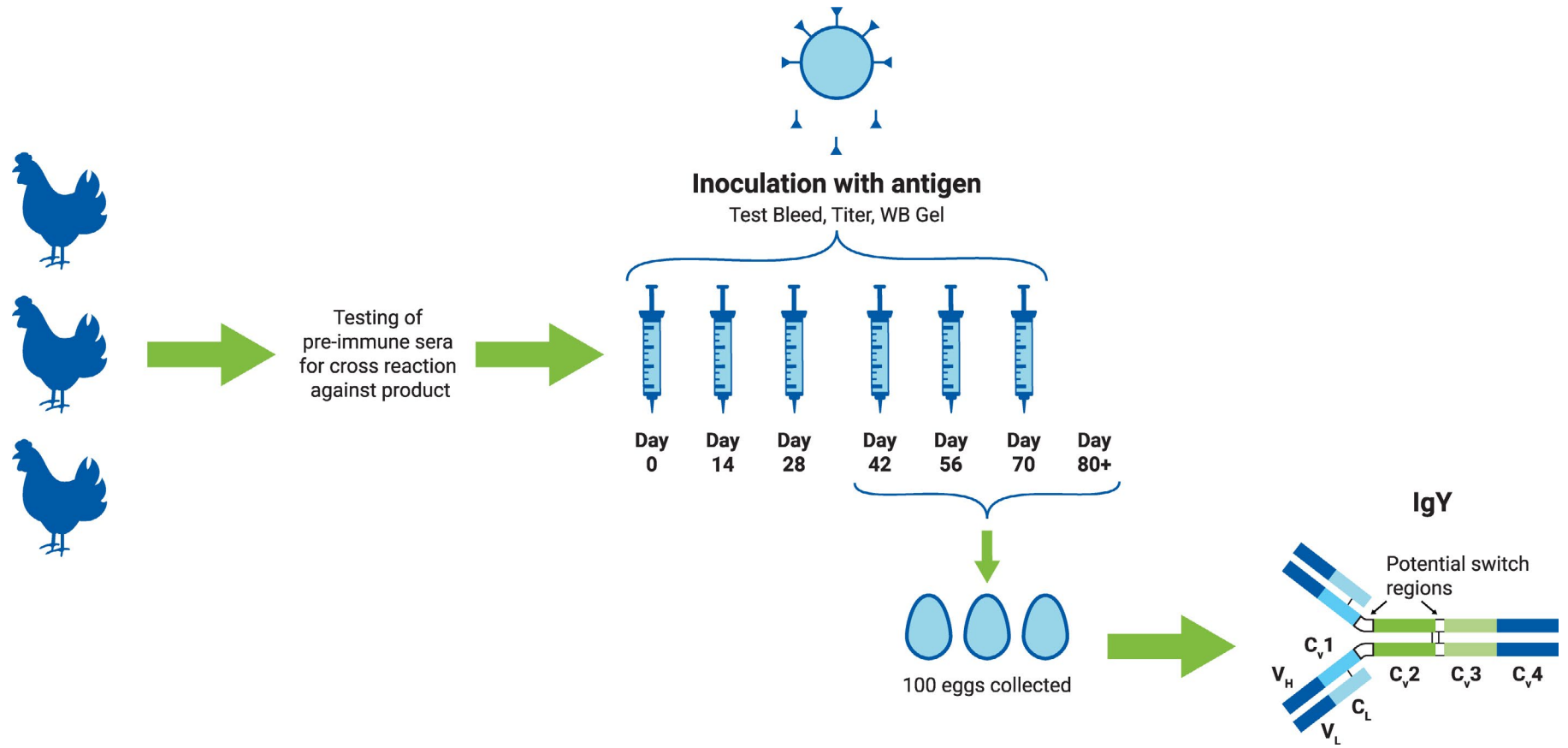
## Immunoglobulin Applications

Immunoglobulins have been used in applications from diagnostic assays to therapeutics. The most widely used immunoglobulin, IgG, is derived from mammals. Chickens, however, produce a slightly different antibody, IgY, which contains a longer Fc region.

What makes chickens an attractive source of antibody production is the greater evolutionary distance between chickens and mammals. Chickens, for the most part, do not recognize mammalian proteins as “self”. These “self” proteins become more immunogenic, leading to an increased antibody diversity in chickens when compared to the mammalian host.

There are benefits of using IgY for prophylactic and therapeutic, non-systemic applications. IgY does not activate the mammalian complement, react with rheumatoid factors, or bind to mammalian Fc receptors. Due to the stability of IgY at low pH conditions, it can be used to combat gastrointestinal infections.

AVS Bio offers a standard three bird, 100 egg IgY project using your protein. We use our own readily available naïve SPF chickens for the highest yielding product. IgY antibody extraction occurs via water dilution and pH change and is concentrated and bottled for shipment on dry ice. Call or email for a custom quote today.





## Specific Pathogen Free Chickens



## Specific Pathogen Free Chickens

Age of Chicken	Material #	Price Per Chicken Sex Not Specified	Material #	Price Per Chicken Sex Specified
1 Day	10100336	\$14.95	N/A	N/A
1 Week	10100337	\$15.70	N/A	N/A
2 Weeks	10100338	\$16.50	N/A	N/A
3 Weeks	10100339	\$17.40	N/A	N/A
4 Weeks	10100340	\$18.30	10100359	\$18.90
5 Weeks	10100341	\$18.90	10100360	\$19.55
6 Weeks	10100342	\$19.55	10100361	\$20.60
61 + Weeks	10100354	\$14.05	10100373	\$15.45

All chickens conform to USDA vs Memo 800.65. Chickens older than 17 weeks are tested according to European Pharmacopoeia requirements.

## General Information

**Delivery:** Chickens are delivered by independent third party surface carriers. Please consult our representatives for quotes.

**Feed:** SPF birds are maintained on special diets, which can be purchased in 50 pound increments at \$3.00 per pound.

**Please Note:** Please consult our representatives to discuss your future needs. Not all ages are available at all time.



## Specific Pathogen Free Chicken Eggs



## Specific Pathogen Free Fertile Eggs

(Based on USDA Memo 800.65 and European Pharmacopoeia Requirements)

[Technical Guideline for SPF Eggs](#)

### Premium

Quantity in Eggs	Material #	Price Per Egg	Material #	Price Per Incubated Egg
1-7,199	10100326	\$5.50	10100332	\$6.65
7,200-21,599	10100326	\$3.10	10100332	\$4.25
21,600 +	10100326	\$2.45	10100332	\$3.60

### Premium Plus

Premium Plus eggs are negative for Chicken Anemia Virus (CAV)

Quantity in Eggs	Material #	Price Per Egg	Material #	Price Per Incubated Egg
1-7,199	10100330	\$5.90	10100331	\$7.05
7,200-21,599	10100330	\$3.45	10100331	\$4.60
21,600 +	10100330	\$2.85	10100331	\$4.00

### Research Quality

Premium Plus quality and Endogenous GS Antigen Negative

Quantity in Eggs	Material #	Price Per Egg	Material #	Price Per Incubated Egg
All Quantities	10100329	\$7.30	10100335	\$8.45

All Premium, Premium Plus and Research eggs are from SPF flocks age 24-64+ weeks. Standard egg size ranging from 44-60+ grams.

### Additional Services

Specification Services	Price Per Egg Surcharge
Flock Age	\$0.30
Egg Gram Size Size Ranges: 44-49; 50-54; 55-59; 60+	\$0.30
Specific Flock	\$0.30
Flock Genetic Line	\$0.30

### Additional Fees for International Orders

International Documentation	\$280 per shipment
International Inland Freight Fees	\$60 per case

### Supplemental Production SPF Eggs

These SPF Premium Plus eggs originate from flocks that are younger than 25 weeks of age that meet USDA Memo 800.65 and European Pharmacopoeia requirements. Due to the production flock age, there is no fertility guarantee, however, these eggs provide benefits for applications when compared to "clean eggs" with a more favorable price than standard SPF eggs.

Quantity in Eggs	Material #	Price Per Egg	Material #	Price Per Incubated Egg
1 - 7,199	10103467	1.60	10103500	2.75
7,200+	10103467	1.35	10103501	2.50





## General Information

**Delivery:** Eggs are delivered by independent third-party surface or air carriers. Please consult our representatives for quotes.

**Charges:** Orders shipping internationally, prices are CPT (departure airport) exclusive of shipping and handling. Orders shipping domestically (USA), freight is prepaid and charged accordingly. Minimum quantity for international orders shipping from the USA is 120 eggs. Prices are subject to change.

**Temperature Recorder:** A temperature recorder can be added to any order at the cost of \$80 per recorder.

**Please Note:** We recommend to verify availability in advance as the supply is limited. Please consult our representatives to discuss your long-term needs.



# General Terms and Conditions of Sale



Charles River Laboratories, Inc. and its affiliates (“Charles River”) will provide the goods (“Products”), animals (“Models”) and services (“Services”) described in the Charles River acknowledgment, quotation, invoice, protocol, statement of work (collectively hereinafter, “SOW”) and Charles River’s customer (“Customer”) will purchase the Products, Models and/or Services pursuant to the specifications contained in the SOW and in accordance with these Terms and Conditions. These Terms and Conditions will also apply to all future purchases of Products, Models and/or Services by Customer.

### 1. Binding Character

Customer’s purchases of Products, Models and/or Services are (a) exclusively governed by these Terms and Conditions, including any mutually agreed special terms and conditions set forth separately and (b) constitutes Customer’s express acceptance of these Terms and Conditions. This provision also applies if Charles River delivers Products or Models or provides Services despite being aware of conflicting or additional standard terms and conditions of Customer.

No other document attempting to negate or otherwise modify the terms hereof, including any purchase order or request for proposal or any deviating or supplementing standard terms and conditions of Customer, will be binding upon Charles River unless expressly agreed to Charles River in writing.

### 2. Provision of the Products and Conduct of the Services

Customer and Charles River will adhere to all applicable laws, rules and regulations (“Applicable Law”).

If an amendment to the SOW requires additional or

different work by Charles River, Charles River may agree to conduct such work and will be paid an amount mutually agreed to by the parties. Deviations from the SOW may be made in an emergency without Customer’s approval, provided that Charles River use commercially reasonable efforts to obtain Customer’s verbal approval, which will be subsequently confirmed in writing. The parties acknowledge that during the course of performing the Services in accordance with the SOW, additional costs may be incurred by Charles River as a result of procedural changes, which do not amount to, or require a change in, the SOW, but which are deemed necessary by Charles River to successfully perform the Services, and which could not be foreseen at the time of the preparation of the SOW. If such procedural change occurs, Charles River will advise Customer prior to implementation and solicit Customer’s agreement as to the necessity and additional cost thereof. If Charles River is unable to contact Customer in advance, Customer agrees that in order to maintain the integrity of the Services, Charles River may proceed accordingly, and recover such additional costs from Customer upon presentation of an explanation of such procedural changes and the necessity thereof.

Charles River’s offers are without obligation. Unless expressly confirmed by Charles River in writing, any indicated delivery dates or indicated lead times do not constitute fixed date transactions. Any deliveries are “ex works” (Incoterms 2010) at Charles River’s premises unless expressly agreed otherwise with Customer in writing. Place of performance and delivery is at Charles River’s premises. Title to the Products and/or Models will pass to Customer once the Products and/or Models leave Charles River’s facility or are delivered to a common carrier, as applicable.

### 3. Restrictions on Use and Breeding

Customer will use Models and Products in accordance with all Applicable Laws. Customer agrees and will ensure that all Models purchased from Charles River will not be: (i) used for any purpose other than the internal research of Customer, (ii) bred (for sale or otherwise), unless Charles River provides Customer with prior written consent, (iii) provided to any agent or other third party for any reason, including, but not limited to, breeding or other services, unless Charles River provides Customer with prior written authorization, or (iv) modified in any way without the prior written authorization of Charles River, except for modifications for internal research purposes only. Models from Charles River include: (i) the purchased animals themselves, (ii) all descendants of those purchased animals derived by inbreeding or crossbreeding, including modified and unmodified derivatives of those animals or their descendants, or by any other reproductive technologies, and (iii) animals purchased from Charles River that have been modified in any way (genetically or otherwise) and their descendants. Customer will not, without the prior written consent of Charles River, return Products, Models or shipping containers to Charles River.

The purchase of any Products or their components, Models or Services conveys to Customer the non-transferable, non-sublicensable, non-exclusive right to internally use the Model, Product, and the components of the Product, only in research conducted by Customer and specifically in accordance with the SOW. Customer cannot sell, transfer, or make available to a third party the Products or their components, Models including if modified, or the Services for Commercial Purposes without prior written consent. “Commercial Purposes” means any activity for cash or other consideration not expressly permitted by Charles River including, but not limited to sale, resale, and/or distribution of the



Products and/or Models (including if modified), or their components or materials made using the Product or their components, except by licensed distributors of Charles River, whether or not resold for use in research. The foregoing limitations are required by Charles River given the nature and sensitivity of the Products, Models and Services provided by Charles River. To the extent that Charles River owns or controls (with the right to sublicense) patent rights or other intellectual property rights applicable to the Models or Products, those rights are licensed to Customer on a limited, revocable, non-exclusive,

non-transferable, and non-sublicensable basis only for the internal uses expressly permitted above. If Customer fails to comply with the foregoing limitations, in addition to any other remedies available to Charles River, the rights granted under this section will automatically terminate.

These Terms and Conditions are expressly made subject to any laws, regulations, orders, or other restrictions on the export or import of the Products, Models or Services or information about such Products, Models or Services which may be imposed from time to time by any applicable government or government entity, including, but not limited to, the United States of America. Customer will not export the Products, Models or information about the Products, Models or Services without the prior written consent of Charles River and compliance with such laws, regulations, orders, or other restrictions. Customer represents and warrants that (a) it is not located in a country that is subject to a U.S. Government or other internationally regulated embargo, or that has been designated by the U.S. Government or other international regulatory agency as a “terrorist supporting” country; and (b) Customer is not listed on any U.S. Government or other applicable international list of prohibited or restricted parties.

#### 4. Compensation

Unless otherwise agreed to by the parties, prices will be as per the price list (if applicable, price of Models is based on highest weight range) on the day of delivery, and do not include taxes, packaging, insurance, or shipment expenses. Charles River may modify the price list from time to time. Customer will pay Charles River as set forth in the SOW for Services, Products and/or Models. All invoices are due and payable thirty (30) days from the date of the invoice without any deductions and Customer agrees to pay all invoices submitted. Customer will not withhold payment, assert a right of retention or set off any counterclaims unless Customer’s counterclaims have been finally adjudicated by a competent court or have been acknowledged by Charles River in writing. All amounts not paid by Customer when due will accrue interest from the applicable due date until paid, at the highest rate permitted under Applicable Law. Charles River may also elect to cease or suspend the supply of Models or Products and any work on the Services, or withhold required reports or other deliverables if Customer does not make payments when due and payable.

All termination, delay, or cancellation fees are set forth in the applicable Research Models and Services catalog or the SOW.

If in the judgment of Charles River, the Customer’s financial condition is precarious or there has been a materially adverse change in Customer’s financial condition, Charles River will have the right to demand payment or other assurances which it deems adequate before providing any Products, Models or Services.

#### 5. Test Articles

Customer will provide Charles River with sufficient

amounts of compounds, materials, animals, substances, devices, and protocols meeting relevant specifications, including health and genetic data (“Test Articles”) with which to perform the Services. Customer will provide Charles River with complete and accurate data to apprise Charles River of the identity, strength, purity, stability, composition or other characteristics, proper storage, and safe handling requirements of the Test Articles, including a Material Safety Data Sheet (MSDS) or equivalent documentation. Customer will certify to Charles River that the methods of synthesis, fabrication, or derivation of the Test Articles have been documented. All costs associated with shipping the Test Articles to Charles River will be the responsibility of Customer, and Charles River will not be responsible for any loss, damage, or destruction of the Test Articles while in transit. All Test Articles and materials used in connection with the Services will remain the property of Customer.

#### 6. Reports

Charles River will keep complete and accurate records of the status and progress of the Services if agreed in the SOW or as required by Applicable Law. Charles River will furnish a report or data containing information as specified in the SOW. All reports will be prepared in the standard format of Charles River.

Neither Charles River nor Customer will publish any report or data prepared for Customer by Charles River without the prior written consent of the other party, which will not be unreasonably withheld.

If Charles River provides electronic access to the data, records, reports and other documentation and Customer elects to use such electronic access, the use of such electronic access will be governed by Charles River’s standard access terms and conditions which are available on request.



## 7. Inspection

Upon reasonable advance written notice, at mutually agreeable and during regular business hours, Charles River will permit Customer to visit the Charles River facilities where the Services are performed to monitor Charles River's performance of the Services in compliance with Charles River's biosecurity measures, Charles River's business requirements and ensuring an uninterrupted course of business at Charles River's premises.

Charles River will notify Customer as soon as practical of any regulatory inspection of Charles River's facilities that directly impacts the Services provided to Customer.

## 8. Ownership

Any inventions, techniques, intellectual property, technology, commercial and/or industrial secrets, regardless of whether patented or registered, for providing the Models or Products or performing the Services are, and will remain, Charles River's exclusive property including, but not limited to, present and future documentation, scientific and technical data, test procedures, and other information that is owned or licensed by Charles River and is not developed hereunder.

Charles River will have the right to use concurrent control data as part of its general historical database. Any data, discoveries, or inventions developed or generated, which directly relate to any information or materials provided by Customer will be the property of Customer. Charles River agrees to assist Customer in securing any patents, copyrights, or other proprietary rights in such data, discoveries or inventions, and to perform all reasonable acts that may be reasonably required to vest in Customer all right, title, and interest in such data, discoveries, or

inventions, and Charles River will be compensated at its standard rates for such assistance. All costs and expenses associated with establishing Customer's rights therein will be Customer's responsibility.

## 9. Archiving

Provided that Customer is not in financial default under this Terms and Conditions or under any SOW, all reports and supporting documentation resulting from the Services are Customer's property ("Materials"). Charles River will retain the Materials for the period set forth in the SOW. At the end of such period, Charles River will contact Customer to determine whether to, all options at Customer's expense: (a) extend storage of the Materials, (b) return the Materials to Customer, or (c) dispose of the Materials. If Customer requests Charles River to continue to store the Materials and Charles River agrees,

Charles River will invoice Customer at Charles River's then current rates. If Customer fails to give such instructions, Charles River will notify Customer, and if instructions are not forthcoming within thirty (30) days of said notification, Charles River will have the option of continuing to store the Materials or

returning the Materials to Customer at Customer's expense. Customer will be liable for storage charges until the Materials are returned to Customer. While the Materials are in transit to Customer, all risk of loss or exposure to the Materials will be borne by Customer.

If the Materials require special storage conditions, additional charges will be assessed and invoiced to Customer. Invoices will be issued annually in advance and are due and payable upon receipt.

## 10. Warranties

Customer warrants that it owns all rights, title, and interest in the Test Articles and the intellectual property related thereto, and that Charles River's use of the Test Articles does not infringe any third party rights.

Subject to section 3, Charles River warrants that the Products, Models and Services will conform to the specifications contained or agreed in the applicable SOW and any Applicable Law at the time of delivery or performance. Charles River does not warrant or represent that the results of the Services will be acceptable to any regulatory or governmental agency nor that the results of the Services will enable Customer to further develop, market, or otherwise exploit the Test Articles or any other product or service.

THE WARRANTY BY CHARLES RIVER SET FORTH HEREIN IS IN LIEU OF ANY AND ALL OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, SUITABILITY OF THE PRODUCTS, MODELS AND SERVICES FOR CUSTOMER'S PURPOSES, IMPACT OF THE PRODUCTS, MODELS AND SERVICES ON CUSTOMER'S OPERATIONS, OR NON-INFRINGEMENT OF A PATENT, TRADEMARK OR OTHER INTELLECTUAL PROPERTY RIGHT.

Any claim for breach of warranty must be made in writing to Charles River within ten (10) business days after the Products or Models are delivered or the completion of Services, or per Applicable Law, after which time the Products, Models or Services will be deemed finally accepted. Subject to the limitations set forth in Section 11, if Charles River commits a breach of the warranty



as set forth in this Section, Charles River's sole liability, and Customer's sole remedy, will be for Charles River to replace the Products or Models, or issue a credit therefore, or conform the work or portion of the Services affected by the breach to the relevant specification. Charles River will be entitled, at its sole election, to correct or replace the defective Product, Model or Service or to issue a credit. The delivery of a defective Product, Model or Service will not constitute a violation of a material contractual obligation by Charles River.

#### 11. Limitation of Liability

Charles River will not be liable for penalties or liquidated damages or for special, indirect, consequential, punitive, exemplary, or incidental damages of any type or kind (including, without limitation, lost profits) regardless of whether any such losses or damages are characterized as arising from breach of contract, breach of warranty, tort, negligence, strict liability, or otherwise, even if Charles River is advised of the possibility of such losses or damages, or if such losses or damages are foreseeable.

Charles River's liability, regardless of the form of action, will be limited to actual and foreseeable damages and will not exceed the total price paid for the Products, Models or Services pursuant to which such liability arises. Charles River will not be liable for any damages arising from, or in connection with, any decision by Customer or any third party to further research, develop or market the Test Articles or any derivative or product or service related thereto, or the use made of the Products, Models, Services, or Test Articles or service related thereto.

In the case of a delay in delivery for which Charles River is responsible, Charles River's maximum liability is limited to an amount of 5% of the value of the delivery

affected by the delay. The limitations period for any claims against Customer is twelve (12) months unless mandatory statutory provisions require a longer period of limitation.

#### 12. Indemnities

Customer will defend, indemnify, save, and hold harmless Charles River, its parent, subsidiaries and affiliates and their respective directors, officers, employees, and agents from and against any claims, demands, suits, actions, causes of action, losses, damages, fines, and liabilities, including reasonable professional fees arising out of or in connection with (a) the research, development, manufacture, distribution, use, sales or other disposition by Customer, or any distributor, collaborator, representative or agent of Customer, of the Test Articles and/or any other substances upon which the Services were performed or any use made of the Products and/or Models, (b) any infringement of any third party's intellectual property rights or unauthorized use or misappropriation of its know-how or trade secrets, (c) Customer's gross negligence, willful misconduct, or breach of this agreement, or (d) personal injury related to contact with the Products or Models during visits to Charles River's facilities or after delivery of the Products or Models to Customer.

#### 13. Insurance

Each party will have insurance sufficient to cover its interest or potential liabilities hereunder including, but not limited to, worker's compensation, if applicable, and comprehensive general liability.

#### 14. Confidentiality

In the course of providing the Products or Models or performing the Services, Charles River and Customer may exchange proprietary and confidential information. The parties will identify, in writing, such information as confidential and/or proprietary.

If a party intends to disclose confidential information to the other party orally, the disclosing party will (i) alert the other party of the confidential nature of the disclosure prior to the disclosure and (ii) provide written notice to the other party of the confidential nature and contents of such disclosure within ten (10) days of the original disclosure. Each party will use its commercially reasonable efforts to maintain such information in confidence and will employ reasonable and appropriate procedures to prevent its unauthorized disclosure unless required by Applicable Law to disclose such information provided that, to the extent permitted by Applicable Law, the receiving party provides prompt written notice of such disclosure to the disclosing party and takes reasonable and lawful actions to avoid and/or minimize the extent of such disclosure or seek confidential handling of such information, all at the cost and expense of disclosing party. Neither party will use the other party's proprietary and/or confidential information other than in performance of this Agreement. These obligations of confidentiality will survive termination or expiration of the Terms and Conditions for a period of five (5) years.

These confidentiality provisions will not apply to any information, which (i) is known to the receiving party at the time it was obtained from the disclosing party, (ii) is acquired by receiving party from a third party, and such third party did not obtain such information under an obligation not to disclose, (iii) is or becomes published or otherwise in the public domain other than by violation



of these Terms and Conditions by the receiving party, (iv) is independently developed by the receiving party without reference to or reliance upon the information provided by the disclosing party, or (v) is required to be disclosed by the receiving party to comply with Applicable Laws or governmental regulations, provided that the receiving party provides prompt written notice of such disclosure to the disclosing party and cooperates with the disclosing party's reasonable and lawful actions to avoid and/or minimize the extent of such disclosure, at the disclosing party's expense.

During any remote monitoring, audit or inspection of Charles River, Customer agrees not to (a) take photographs or use any other method of recording information regarding the site; (b) access or attempt to access or view any of the work product or network systems that are being used by Charles River without the express permission and in the presence of the Charles River representative that is hosting the remote audit; or (c) remove any document, equipment or other materials from the remote study monitoring or audit without Charles River's prior written permission.

### 15. Termination

Unless otherwise specified in the SOW, Customer may terminate the SOW at any time without cause upon thirty (30) days prior written notice to Charles River. In the event of such termination, Charles River will be paid for all Products and/or Models provided or Services rendered through the effective date of termination, together with any additional expenses incurred to shut down the Services, any irrevocably committed costs and any cancellation or termination fee set forth in the current Research Models and Services catalog or the SOW.

Either party may terminate these Terms and Conditions or SOW, as applicable, at any time upon thirty (30) days prior

written notice to the other party, for material breach of the Terms and Conditions by the other party if such breach is not remedied to the non-breaching party's reasonable satisfaction within the thirty (30) day notice period.

Upon termination, neither party will have any further obligations, except that (i) the liabilities accrued through the date of termination and (ii) the obligations which by their terms survive termination, including the applicable confidentiality, record keeping, regulatory compliance, intellectual property and indemnification provisions of these Terms and Conditions, will survive termination.

### 16. Force Majeure

Except with respect to the payment of any amount due hereunder, neither party will be in default of any obligation to the extent that the performance of such obligation is prevented or delayed by fire, flood, earthquake, hurricane, explosion, disease, contamination, pandemic/epidemic, strike, acts of terrorism, war, insurrection, embargo, government requirement, civil or military authority, animal activism, act of God, or any other event, occurrence or condition which is not caused, in whole or in part, by that party, and which is beyond the reasonable control of that party.

### 17. Governing Law and Dispute Resolution

These Terms and Conditions and any dispute arising from or in connection with the sale of the Products, Models and/or Services are governed by, and will be construed in accordance with, the laws of Delaware, excluding the United Nations Convention on the International Sale of Goods and without regard to any choice of law principle that would dictate the application of the law of another jurisdiction.

The parties will attempt to resolve through negotiations

any controversy, claim, or dispute. If the negotiations are not successful, upon written demand of either party, the claim, controversy or dispute will be submitted to arbitration. Such arbitration will take place in Boston, Massachusetts, will be conducted in English, and will proceed in accordance with the rules of the American Arbitration Association in force from time to time. A record and transcript of the proceedings will be maintained. Any award will be made in writing. The determination of a majority of the panel of arbitrators will be the decision of the arbitrators, which will be binding regardless of whether one of the parties fails or refuses to participate in the arbitration. The arbitrators will decide on the recovery of the costs of the arbitration, except expert and attorneys' fees.

### 18. Miscellaneous

All notices from one party to the other will be in writing. Notices will be sent by internet transmission, overnight courier, or certified mail, return receipt requested. All notices will be effective upon receipt.

The business relationship of Charles River to Customer is that of an independent contractor and not of a partnership, joint venture, employer, agent, or any other kind of relationship.

These Terms and Conditions, and the rights and obligations hereunder, may not be assigned or transferred by either party without the prior written consent of the other party.

These Terms and Conditions, together with the SOW, set forth the entire agreement and understanding between the parties, superseding any and all previous statements, negotiations, documents, agreements and understandings, whether oral or written, as to the subject matter hereof.



In the event that any one or more of the provisions contained in these Terms and Conditions is held to be invalid, illegal or unenforceable in any respect, that invalidity, illegality or unenforceability will not affect any other term or condition, and all other terms and conditions will remain in full force and effect.

Any modification or waiver of these Terms and Conditions will require written form and Charles River approval. This written form requirement also applies to a waiver or modification of the written form requirement itself.

### 19. Intellectual Property

Charles River® and Charles River Laboratories® are registered trademarks of Charles River. VAF/Plus®, VAF/Elite®, BlastoKit®, CD®, CD-1®, CFW®, EAD®, Gnoto-safe®, PRIA®, SHO®, THE POUND MOUSE®, Multiplexed Fluorometric ImmunoAssay® (MFIA®), I•CRYO®, EZ-Spot®, Laboratory Testing Management® and MAX-BAX® are registered trademarks of, or are under license by, Charles River. CDF™, CF-1™, Sew Easy™, ICM™ and LTM™ are trademarks of, or are under license by, Charles River. The Source<sup>SM</sup> is a service mark of Charles River. Nothing in these terms and conditions should be construed as granting, by implication, estoppel, waiver or otherwise, any license or right of use to any Charles River trademark. Client will not use these, or any other Charles River trademark, for any purpose, including in any publicity, promotion, news release or other public disclosure without the prior written permission of Charles River, except, in each case, as may be required by law.

### 20. Privacy

The Charles River privacy policy can be found at <https://www.criver.com/about-us/privacy-policy>.