

Appendix

- I. Baselines Broilers, Breeders, Layers
- II. Half-life values Maternal Antibodies IBD
- III. Optimal Titers to Vaccinate IBD (Target Titers)

BIOCHEK VACCINATION BASELINES BROILERS

Titer values may vary according to age and type of bird , vaccine type, vaccination program, and other factors such as placement programs. You may find different results under different circumstances.

TEST	VACCINE TYPE	MEAN TITER RANGE AT PROCESSING (35D- 45D)	VI Index	SUSPECT TITER INFECTION
IBV	live, 1x@ 01D (H120/mild Mass, Arkansas, DE072, MA5, IB primer, 4/91, IB Bird)	300 - 1 500	< 50	> 3 000 VI > 70
	live, 2x@ 01D (H120 , MA5, IB Primer + 4/91, CR88, IB Bird)	500 - 2 500	< 60	> 3 000 VI > 70
	live, 2x (H120, MA5, IB Primer, MMArk)	1 000 - 4 000	< 90	> 5 000 VI > 90
	live, 2x (H120/MA5 + 4/91 or H120 + CR88) < 13D	1 000 - 3 000	< 90	> 4 000 VI > 90
	live, 2x (H120/MA5 + 4/91 or H120 + CR88) > 13D	1 000 - 6 000	< 150	> 8 000 VI > 200
NDV	live , C2 strain, VG/GA, Avinew, Ulster NDW, VH	1 000 - 4 000	< 280	> 10 000 VI > 300
	live, 2x Dr. Water (Clone 30, LaSota)	2 000 - 5 000	< 280	> 10 000 VI > 300
	live, 2x Spray (Clone 30, NDW, LaSota)	4 000 - 8 000	< 280	> 10 000 VI > 300
	Inact . 01D + 2x Live LaSota	4 000 - 12 000 (100% Pos)	< 280	> 14 000 VI > 300
	r-HVT/NDV (in Ovo or S.C. 01D)	500 - 1 500 (10 – 50% Pos)	< 40	> 3 000 (100% Pos) VI > 100
r-HVT/NDV (in Ovo or S.C. 01D + 2x live)	4 000 - 10 000 (> 90 % Pos)	< 280	> 12 000 (100% Pos) VI > 300	
REO	none	0 - 2 500	< 40	> 3 000* VI > 50
ART	live, A strain	1 000 - 2 000		
	live, B strain	1 000 - 4 000		
ILT	TCO	300 - 600 (< 30 % Pos)		> 1000 (≥ 40% Pos)
	CEO	1 000 - 3 000 (> 50 % Pos)		no differentiation
	r-HVT/ILT (in Ovo or S.C. 01D)	500 - 1 500 (10 – 60 % Pos)	< 40	> 2000 (> 80% Pos) VI > 50
ORT	none	0 - 1 500	< 20	> 3 000* VI > 20
CAV	none	0 - 2 500	< 30	> 3 000* VI > 50
FAV-1	none	0 - 3 000	< 40	> 6 000* VI > 50

* Mean Titers of non-vaccinated birds above indicated suspect levels, may indicate enhanced invasion and often correlate with clinical symptoms.

These guidelines are based on our experience and information from our clients. BioChek does not accept any responsibility for the results using these guidelines.

BIOCHEK IBD VACCINATION BASELINES BROILERS

Titer values may vary according to age and type of bird , vaccine type, vaccination program, and other factors such as placement programs. You may find different results under different circumstances.

VACCINE TYPE	MEAN TITER RANGE AT PROCESSING (35D- 45D) WHEN VACCINATED IN PRESENCE OF MATERNAL ANTIBODIES	VI Index	SUSPECT TITER OF INFECTION / OR WHEN VACCINATED WITHOUT PRESENCE OF MATERNAL ANTIBODIES
<u>Intermediate vaccines, up to 2x live vaccination:</u>			
Bursine-2, Bursine Plus	2 500 - 6 500	< 300	> 9 000 VI > 300
D78, Cevac Gumbo L, Avipro precise	2 500 - 8 000	< 500	> 10 000 VI > 500
Gallivac IBD	3 000 - 9 000	< 500	> 11 000 VI > 500
<u>Intermediate vaccines, up to 3x live vaccination:</u>			
Bursine-2	4 000 - 7 500	< 500	> 10 000 VI > 500
<u>Intermediate Plus vaccines, 1x application :</u>			
228E, Bursa plus	6 000 - 10 000	< 500	> 14 000 VI > 500
Cevac IBD L, Vladimir Inst. BG, Avipro IBD Extreme	6 000 - 12 000	< 500	> 14 000 VI > 500
Abic MB	6 000 - 14 000	< 600	> 16 000 VI > 600
<u>Intermediate Plus vaccines, 2x application :</u>			
228E	6 000 - 12 000	< 550	> 14 000 VI > 600
<u>Immune Complex Vaccines</u>			
Transmune IBD (In Ovo vac., or 01D s.c.)	4 000 - 12 000 (100% Pos)	< 500	> 14 000 VI > 500
<u>Recombinant Vector Vaccines</u>			
r-HVT +IBD (In Ovo vac. , or 01D s.c.)	800 - 2 500 (≥80 % Pos.)	< 50	> 4 000 (100% Pos) VI > 100

These guidelines are based on our experience and information from our clients. BioChek does not accept any responsibility for the results using these guidelines.

BIOCHEK VACCINATION BASELINES LAYERS/BREEDERS

Titer values may vary according to age & type of bird , vaccine type, vaccination program, and other factors such as placement programs. You may find different results under different circumstances.

TEST	VACCINE TYPE	MEAN TITER RANGE	WKS AFTER VAC. TO TEST	% POS	VI Index	SUSPECT TITER INFECTION
IBV	live (H120)	1 000 - 2 000	3 - 5 wks	100%		> 4 000
	live (MA5)	1 000 - 4 000	3 - 5 wks	100%		> 6 000
	live (1 st Priming H120, 2 nd 4/91)	6 000 - 10 000	3 - 5 wks	100%	50- 300	> 12 000 VI > 300
	inact.	6 000 - 12 000	5 - 8 wks	100%	50 - 400	VI > 400
IBD	live intermed. (D78, Bursine-2)	4 000 - 12 000	3 - 5 wks	100%	100 - 500	> 14 000 VI > 600
	inact.	7 000 - 20 000	5 - 8 wks	100%	300 - 1 500	
	rHVT/IBD	1 000 - 4 000	7 - 10 wks	100%	50 - 250	> 5 000 VI > 300
NDV	live (Clone30, NDW, Lasota)	2 000 - 8 000	3 - 5 wks	100%	100 - 400	
	inact.	10 000 - 25 000	5 - 8 wks	100%	100 - 2 000	
REO	live	2 000 - 5 000	3 - 5 wks			> 6 000* and > 90% Pos
	inact.	7 000 - 15 000	5 - 8 wks	100%	200 - 800	VI > 800
ART	live	2 000 - 6 000	3 - 5 wks			
	inact.	7 000 - 25 000	5 - 8 wks	100%	50 - 500	
AE	live 1x	5 000 - 12 000	4 - 6 wks	> 80%	50 - 500	
MG	live 6/85 (spray)	negative	6 -12 wks	0%		positive
	live Ts-11, (eye drop)	1 000 - 3 000	6 -12 wks	30-70%		> 5000 and > 90% Pos
	F-strain (dr. water, spray)	2 000 - 8 000	6 -12 wks	100%		
	inact. 2x (Gallimune MG)	3 000 - 6 000	4 - 6 wks after 2 nd	> 90%		
		500 - 1 000	10 -12 wks after 2 nd	40-90%		

* REO: Suspect titer for infection with potentially more virulent strains

- Above titers are based on two times live priming and one time inactivated boosting at 16-18 weeks.

BIOCHEK VACCINATION BASELINES LAYERS/BREEDERS (Continued)

Titer values may vary according to age & type of bird , vaccine type, vaccination program, and other factors such as placement programs. You may find different results under different circumstances.

TEST	VACCINE TYPE	MEAN TITER RANGE	WKS AFTER VAC. TO TEST	% POS	VI Index	SUSPECT TITER INFECTION
MS	live MS-H (eye drop)	500 - 3 000	6 -12 wks	30- 70% Pos		> 5000 and > 90%
AI	Inact 2x H5N2	1 000 - 4 000	6 – 10 wks	100% Pos		
	Inact 2x H9N2	2 000 - 6 000	6 – 10 wks	100% Pos		
EDS	inact. 1x	1 000 - 4 000	4 – 6 wks			
SE (Salm D)	live 3x DW (Salmonella Vac E)	100 - 500	5 - 6 wks	< 15% Pos		
	inact. 2x Salenvac T, Gallimune Se +St	3 000 - 10 000	4 - 6 wks after 2 nd	90-100% Pos	50 - 500	
	Talovac 109 SE, Poulvac SE, Layermune SE, Avipro SE4	1 000 - 5 000	10 -12 wks after 2 nd	50-100% Pos	10 - 100	
SE/ST (Salm B&D)	live 3x DW (Salmonella Vac E+T)	500 - 1 500	5 - 6 wks	< 70% Pos		
	inact. 2x Salenvac T, Gallimune Se +St	3 000 - 12 000	4 - 6 wks after 2 nd	90-100% Pos	50 - 500	
	Talovac 109 SE, Poulvac SE, Layermune SE, Avipro SE4	1000 - 6 000	10 -12 wks after 2 nd	50-100% Pos	10 - 100	
CAV	live (Tymovac, PG4, CAV-Vac, Circomune)	3 000 - 8 000	4 - 6 wks	80-100% Pos	100 - 300	

* **ORT: Titers > 10 000 often correlate with clinical disease**

These guidelines are based on our experience and information from our clients.

BioChek does not accept any responsibility for the results using these guidelines.

BIOCHEK VACCINATION BASELINES LAYERS/BREEDERS (Continued)

Titer values may vary according to age & type of bird , vaccine type, vaccination program, and other factors such as placement programs. You may find different results under different circumstances.

TEST	VACCINE TYPE	MEAN TITER RANGE	WKS AFTER VAC. TO TEST	% POS	VI Index	SUSPECT TITER INFECTION
ORT	none	negative				> 10 000*
ILT	Live TCO	1000 - 3 000	6 - 10 wks	0 - 30% Pos		> 50% positive
	Live CEO	1000 - 6 000	6 - 10 wks	80 - 100% Pos		no differentiation
	r-HVT/ILT (in Ovo or S.C. 01D)	500 – 3 000	6- 20wks	40 – 100% Pos	10 - 100	> 5000 and 100% Pos

These guidelines are based on our experience and information from our clients.
BioChek does not accept any responsibility for the results using these guidelines.

II. Half-lives of Maternal Antibodies IBD

Following are the values we've found for the different type of chickens:

TYPE BIRD	BLEEDING AGE	HALF-LIFE
BROILERS	DAY 1	3.8 DAYS
	DAY 3 - 7	3.0 DAYS
BR. BREEDERS	DAY 1	4.5 DAYS
	DAY 4 - 10	4.0 DAYS
LAYERS	DAY 1	6.0 DAYS
	DAY 4- 10	5.0 DAYS

III. Optimal Titers to Vaccinate IBD (Target Titers)

INTERMEDIATE PLUS VACCINES : OPTIMAL TITER TO VACCINATE 400 - 500
INTERMEDIATE VACCINES: OPTIMAL TITER TO VACCINATE 100 - 250

There are several methods in the BioChek software with which one can predict the date to vaccinate, for now, we recommend using the DEVENTER method. This method corrects for variation in titers. (For more information on this method please consult our information leaflet on vaccination date prediction).