



NetPoulSafe

CHECKING THE EFFECTIVENESS OF CLEANING AND DISINFECTION IN POULTRY HOUSES



MAIN KEY POINTS

- Poultry houses must be cleaned and disinfected (C&D) at the end of each production cycle.
- C&D limits cross contamination of infections into new flocks.
- In Belgium, C&D procedures in poultry houses are checked with hygienograms.

There are 7 steps towards effective C&D

Dry cleaning to remove any residual organic debris (faeces, feathers, etc.) which may interfere with effective disinfection.

Soaking the surfaces (floor and walls) with water and detergent

High pressure cleaning with water to remove detergent from the previous step

Drying time long enough so that the residual water will not dilute the disinfectant

Disinfection with a chemical agent following manufacturer's recommendations to reduce the germ load

Complete drying of the houses before introducing new birds to avoid direct contact with any remaining disinfectant solution

Testing C&D efficacy by determining the bacterial load on cleaned surfaces



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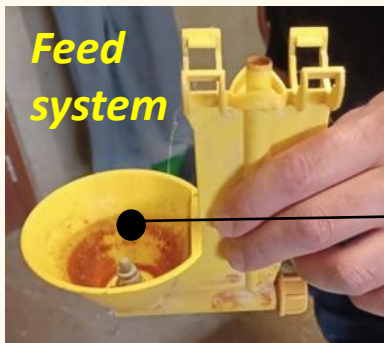
In Belgium, C&D efficacy checks are managed (by HOSOWO certified veterinarians, Dierengezondheidszorg Vlaanderen DGZ or ARSIA) using hygiene monitoring with hygienograms, which determine the total aerobic (bacterial) count (TAC) of cleaned surfaces sampled with agar contact plates (ACP) and bacteriological swabs.

Sampling frequencies set by regulation to control cleaning methods

	Broiler	Layer	Breeding poultry
Belplume	Every 3 production rounds. Every year minimum of 2 samplings per stable	Prior to the establishment of each new production round.	Prior to the establishment of each new production round.
IKB	once a year a sampling per stable	every 2 production rounds	
Royal Decree Belgium 08/10/1998, Ministerial Decree Belgium 08/19/1998)	sampling every 3 production rounds with a minimum of once a year	sampling before each new flock	sampling before each new flock
For a Salmonella-positive flock	every 3 production rounds, a minimum of once a year.		

- ❖ The sampling is carried out within 24 to 72 hours after disinfection.
- ❖ Between the disinfection and the sampling, the houses must be adequately ventilated for at least 2 hours and completely dried up.
- ❖ The poultry farmer must inform the company veterinarian or a recognized laboratory for the sampling.

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		Score bacterie kolonies (B) SOP/BAC/ANA/04
	Monsternameplaats	Resultaat
	Vloer	1
	Vloer	1
	Vloer	1
	Vloer	1
	Voerhopper	1
	Voersysteem	0
	Voersysteem	0
	Voersysteem	0
	Voersysteem	1
	Voorruimte	1
	Wand	0
	Wand	0
	Wand	1
	Gemiddelde	0,5
	Gemiddelde IKB-NL	0,5 (*C1)

*C1: Gemiddelde van alle monsters uitgezonderd Eierbewaarlokaal, Voorruimte.



The number of bacterial colonies (cfu: colony forming units) in the house are measured and given scores

0 cfu (score "0")
1-40 cfu (score 1)

41-120 cfu (score 2)
121-400 cfu (score 3)

> 400 cfu (score 4)
innumerable (score 5)

The report includes the individual sample scores as well as the average scores

Measures to be taken according to the scores obtained

≤1.5

1.5 ≤ 3.0

> 3.0

In agreement.
New stock can be introduced

Repeat disinfection
Introduce new stock after the next vacancy period

Re-cleaning and disinfection
and new hygienogram.
Introduce new stock after the next vacancy period

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Who does the sampling and testing ?



- Only authorized laboratories should perform sampling and testing.
- Sampling and testing in breeder farms are done by DGZ/ARSIA.
- For Broilers and layer farms HOSOWO certified companies/vets can also do the sampling.

HOSOWO-recognised organisation have earned accreditations for performing the following laboratory activities:

- Sample collection for hygienograms
- Sample analysis for hygienograms
- Sample collection for stall testing: presence of Salmonella and Campylobacter after cleaning and disinfecting



Take home message

Hygienograms are surface bacterial counts that are used to monitor the efficiency of cleaning and disinfection of the empty house between flocks. Evaluation of cleaned surfaces after C&D helps to better prevent infections through residual sources of infectious material.

For more information:

- NETPOULSAFE project : <https://www.netpoulsafe.eu>



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