

Introducing the



Portfolio

Our Story

The push towards phosphate-free detergents has been gaining momentum both domestically and internationally over the last twenty years. By 2010, several U.S. states had banned the use of detergents containing high levels of phosphates.

Why the concern around phosphates? As a naturally occurring nutrient, phosphorous run-off helps support the growth of algae. Algae overgrowth can create low-oxygen conditions which adversely impact aquatic life and the overall environment.

To minimize the phosphates in detergents, two obstacles had to be overcome:

1. Phosphates perform very well as detergents and are present in most products available.
2. Historically, phosphate-free products have been more expensive when compared to phosphate-based products.

At Neogen, we believe that all of today's global food producers find value in being stewards of the environment. We wanted to help producers achieve that goal with exceptional products at affordable prices.

Introducing the new EVO line of phosphate-free detergents, these EVOLved products will provide the effective cleaning you require and the competitive pricing you desire all with minimal environmental impact.

Stuart Heller

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**A PORTFOLIO OF
PHOSPHATE-FREE CLEANERS
DESIGNED WITH THE
EVOLVING INDUSTRY IN MIND**

Portfolio Benefits:

Phosphate-Free Formulas
Formulated with Biodegradable Detergents
Compatible with all Neogen Disinfectants
Superior Foaming Capabilities

Chlor-A-Foam EVO

Product Description

Chlor-A-Foam EVO Hatchery and Equipment Cleaner is a phosphate free, high foaming alkaline cleaner that rapidly removes protein, fat and carbohydrate soils from surfaces, as well as stubborn yellow stains. **Chlor-A-Foam EVO** is used for cleaning hatchers, setters, equipment, egg rooms, chick boxes, walls, floors and refuse areas in poultry hatcheries. In poultry and meat processing plants, it is used for cleaning equipment, shackles, walls, floors and refuse areas. It is excellent for stainless steel, concrete, plastic, fiberglass, glass, tile and other surfaces. It can be used through a variety of foam generating equipment as well as in pressure washers. **Testing completed at the Northeast Laboratories, Inc. found Chlor-A-Foam EVO to contain <0.1 ppm total phosphorous and was readily biodegradable.**

Actives:	Potassium hydroxide and sodium hypochlorite
Use:	Hatcheries, processing facilities and equipment
Activity:	All purpose, high-foaming, brightening detergent
Application:	Foamed or sprayed with pressure washing equipment

Usage Rates

Task	Recommended Dilution
Foam cleaning	1.75% - 3% solution
Foam cleaning for heavy soil loads	4% - 5% solution
Pressure washing	0.75% solution
Food processing and food contact surfaces	0.75% solution

Chlor-A-Foam EVO

Product Performance Testing

Objective: To test the effectiveness of Neogen Chlor-A-Foam EVO cleaner on three different surfaces.

Test Substance:	Chlor-A-Foam™ EVO Lot No. 326294
Cleaner Dilution:	4 ounces per gallon
Cleaner Contact Time:	10 minutes
Rinse Time:	1 minute

Results

Surface Type: Stainless Steel							
Before Cleaning				After Cleaning			
Sheet #		Weight of clean sheet (g)	Weight of dried dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet, dried (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	R1	103.3	106.4	3.1	103.4	0.1	96.8
2	R2	120.4	123.4	3.0	120.6	0.2	93.3
3	CONTROL	102.3	106.1	3.8	105.2	2.9	23.7

Surface Type: Plastic

Before Cleaning		After Cleaning					
Sheet #	Weight of clean sheet (g)	Weight of dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet (g)	Weight of dirt remaining (g)	Percent of dirt removed	
1	R1	51.8	55.0	3.2	51.9	0.1	96.9
2	R2	53.2	55.6	2.4	53.3	0.1	95.8
3	CONTROL	51.2	54.4	3.2	53.8	2.6	18.8

Surface Type: Tile

Before Cleaning		After Cleaning					
Sheet #	Weight of clean sheet (g)	Weight of dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet (g)	Weight of dirt remaining (g)	Percent of dirt removed	
1	R1	659.3	663.2	3.9	659.3	0.0	100.0
2	R2	659.7	665.0	5.3	659.8	0.1	98.1
3	CONTROL	658.9	664.4	5.5	663.5	4.6	16.4

Conclusion: Chlor-A-Foam EVO met the cleaning effectiveness criteria by removing more than 90% of dirt from all three surfaces tested.



ACID-A-FOAM™ EVO

CLEANER AND DESCALER

- Foaming acidic cleaner for use in alternating pH programs in poultry, swine, veal, dairy, cattle, canine and horse operations, and food-processing plants
- Compatible with other disinfectants
- Removes mineral scale, detergent residues, and other elements left after repeated use of alkaline cleaners

 **NEOGEN**

Net Contents: 1 gal. (3.79 L)



Components:

Glycolic acid
Acrylic acid
Hydrogen chloride
Largely inertly active acids
Sulfamic acid
D-Glucopyranose, oligomers, and other

Acid-A-Foam EVO is used as a foaming cleaner to remove detergent residues from a clean surface. It is applied to a surface, prepared the surface for the application of a disinfectant, protein, and other active ingredients.

RECOMMENDED USAGE OF EVO
For Poultry Facilities: Use 100-200 ppm for cleaning of trays, racks, and other equipment.

For Farm Uses: Use a 100-200 ppm solution in barns, and as a walling agent in stables.

For Food-Processing Plants: Use 100-200 ppm coolers. It cleans and brightens metal, meat, and casing pans.

Acid-A-Foam EVO

Product Description

A phosphate free, acidic foaming cleaner, **Acid-A-Foam EVO** is used as an alternative to regular hatchery, equipment or barn cleaner to remove detergent residues, mineral scale and other hard-to-remove elements. A clean surface is required for complete disinfection. Alternating between a good alkaline detergent and a good acid-based detergent maximizes surface cleanliness and, therefore, prepares the surface for the second step of disinfection. **Acid-A-Foam EVO** removes dirt, grime, protein, and oils as well as minerals and adherent films. **Northeast Laboratories, Inc. found Acid-A-Foam EVO to contain <0.1 ppm total phosphorous and the formulation was readily biodegradable.**

Actives:	Glycolic Acid
Use:	Acidic foaming cleaner for hatchery or farm use
Activity:	General cleaner, deodorizer, and effectively removes hard water scale and mineral deposits
Application:	Foamed, sprayed with pressure washing equipment, or manual application

Usage Rates

Task	Recommended Dilution
General purpose cleaning	0.75% - 2.5% solution
Food processing and food contact surfaces	0.75% - 2.5% solution
Barn cleaning	0.25% - 0.5% solution

Acid-A-Foam EVO

Product Performance Testing

Objective: To test the effectiveness of Neogen Acid-A-Foam EVO cleaner on three different surfaces.

Cleaning Test for:	Acid-A-Foam™ EVO Lot No. 325279
Cleaner Dilution:	3 ounces per gallon
Cleaner Contact Time:	10 minutes
Rinse Time:	1 minute

Results

Surface Type: Stainless Steel							
Before Cleaning				After Cleaning			
Sheet #		Weight of clean sheet (g)	Weight of dried dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet, dried (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	R1	125.8	128.6	2.8	125.9	0.1	96.4
2	R2	126.0	128.5	2.5	126.0	0.0	100.0
3	CONTROL	102.3	106.1	3.8	105.2	2.9	23.7

Surface Type: Plastic							
Before Cleaning				After Cleaning			
Sheet #		Weight of clean sheet (g)	Weight of dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	R1	50.7	53.8	3.1	50.7	0.0	100.0
2	R2	56.5	56.5	3.1	53.4	0.0	100.0
3	CONTROL	51.2	54.4	3.2	53.8	2.6	18.8

Surface Type: Tile

		Before Cleaning			After Cleaning		
Sheet #		Weight of clean sheet (g)	Weight of dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	R1	659.3	663.4	4.1	659.3	0.0	100.0
2	R2	660.8	666.7	5.5	660.9	0.1	98.3
3	CONTROL	658.9	664.4	5.5	663.5	4.6	16.4

Conclusion: Acid-A-Foam EVO met the cleaning effectiveness criteria by removing more than 90% of dirt from all three surfaces tested.

Descaling Capabilities:

Objective: To test the descaling effectiveness (mineral removability) of Neogen Acid-A-Foam EVO cleaner.

Cleaning Test for:	Acid-A-Foam™ EVO Lot No. 325279
Cleaner Dilution:	10% in water at 400 ppm hardness
Cleaner Contact Time:	20 minutes
Physical Observations:	Bubbles were evolving from the calcium blocks

Weights of Calcium Blocks	R1	R2	R3	Mean
Initial weight (g)	1.3328	1.4528	1.1581	1.3146
Final weight (g)	1.3043	1.4258	1.1210	1.2837
Difference (g)	0.0285	0.0270	0.0371	0.0309

Conclusions: Acid-A-Foam EVO, tested in triplicates with calcium blocks, met the specified weight loss of more than 0.02 grams. Hence, the product is satisfactory in its performance to demineralize calcium deposits from hard surfaces.



CHLORINATED TRAY WASH EVO

GENERAL PURPOSE CHLORINATED CLEANER

- Chlorinated low-foaming detergent
- Ideal for use in hatcheries to clean trays, racks, plastic flats and boxes in automatic washers
- For use in washing commercial eggs, hatching eggs, and as a CIP cleaner in egg breaking operations
- Ideal for use through chemical proportioners

 NEOGEN

Net Contents: 1 gal. (3.79 L)



Components

Hydrochloric Acid
Sodium Hypochlorite
Hydroxyethyl Cellulose

NET WT

NET WT

of Gallons

of Liters

of Gallons

of Liters

of Gallons

of Liters

of Gallons

of Liters

of Gallons

of Liters

of Gallons

of Liters

of Gallons

of Liters

of Gallons

of Liters

Chlorinated Tray Wash EVO

Product Description

Chlorinated Tray Wash EVO is a chlorinated, low-foaming cleaning compound specifically designed for washing trays, plastic chick boxes, egg cases and filler flats in automatic tray washers. It is also ideal for washing shell eggs intended for table use, break out, or hatching. Chlorinated Tray Wash EVO is low-foaming and ideal for use in chemical proportioners as well as in manual feeding operations. It is an excellent clean-in-place (CIP) for egg breaking operations.

Actives:	Sodium Hypochlorite
Use:	Alkaline, Chlorinated, Non-Foaming Cleaner for automated tray washers or general farm use
Activity:	General cleaner
Application:	Automated tray washers or pressure washing equipment

Usage Rates

Task	Recommended Dilution
For use in automatic washers	0.25% - 0.75% solution
Egg wash application	0.25% - 0.75% solution
CIP cleaner application	0.5% solution

Chlorinated Tray Wash EVO

Product Performance Testing

Objective: To test the effectiveness of Neogen Chlorinated Tray Wash EVO cleaner on four different surfaces.

Cleaning Test for:	Chlorinated Tray Wash EVO, Lot No. LTEW100419
Cleaner Dilution:	0.5 oz/gallon (4 mL/L)
Cleaner Contact Time:	10 minutes
Rinse Time:	1 minute

Results

Surface Type: Stainless Steel

		Before Cleaning			After Cleaning		
Sheet #		Weight of clean sheet (g)	Weight of dried dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	CTW EVO - Test 1	125.8	129.5	3.7	125.8	0.0	100.0
2	CTW EVO - Test 2	121.7	125.4	3.7	121.8	0.1	97.3
3	BioSentry LTEW - Test 1	103.3	106.9	3.6	103.4	0.1	97.2
4	BioSentry LTEW - Test 2	120.5	124.3	3.8	120.5	0.0	100.0
5	Water - CONTROL	102.9	106.6	3.7	104.1	1.2	67.6

Surface Type: Plastic

		Before Cleaning			After Cleaning		
Sheet #		Weight of clean sheet (g)	Weight of dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	CTW EVO - Test 1	50.7	54.3	3.6	50.7	0.0	100.0
2	CTW EVO - Test 2	54.3	58.1	3.8	54.3	0.0	100.0
3	BioSentry LTEW - Test 1	53.5	57.0	3.5	53.5	0.0	100.0
4	BioSentry LTEW - Test 2	53.7	57.1	3.4	53.7	0.0	100.0
5	Water - CONTROL	51.9	55.2	3.3	53.0	1.1	66.7

Surface Type: Tile

		Before Cleaning			After Cleaning		
Sheet #		Weight of clean sheet (g)	Weight of dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	CTW EVO - Test 1	660.1	663.9	3.8	660.2	0.1	97.4
2	CTW EVO - Test 2	659.5	663.0	3.5	659.5	0.0	100.0
3	BioSentry LTEW - Test 1	659.7	663.4	3.7	659.8	0.1	97.3
4	BioSentry LTEW - Test 2	659.3	662.9	3.6	659.3	0.0	100.0
5	Water - CONTROL	659.9	663.1	3.2	661.2	1.3	59.4

Surface Type: Eggs

		Before Cleaning			After Cleaning		
Egg #		Weight of clean sheet (g)	Weight of dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	CTW EVO - Test 1	78.6	79.7	1.1	78.6	0.0	100.0
2	CTW EVO - Test 2	72.8	74.5	1.7	72.8	0.0	100.0
3	BioSentry LTEW - Test 1	71.2	72.7	1.5	71.3	0.1	93.3
4	BioSentry LTEW - Test 2	76.6	78.2	1.6	76.7	0.1	93.7
5	Water - CONTROL	70.7	72.1	1.4	71.6	0.9	35.7

Conclusion: Chlorinated Tray Wash EVO meets the cleaning effectiveness criteria by removing a percent of dirt from all three surfaces tested and from eggs equal to or greater than the percent of dirt removed by BioSentry Liquid Tray & Egg Wash.



ACID TRAY WASH EVO

ACIDIFIED, LIQUID TRAY WASH

- For Use in Hatcheries to Clean Trays, Racks, Plastic Flats, and Boxes in Automatic Washers
- Ideal for Use through Chemical Proportioners

NEOGEN

Net Contents: 1 gal. (3.79 L)



Components:

Hydrogen chloride
Glycolic acid
Sulfamic acid

Acid Tray Wash EVO is a multi-use tray, plastic chick lines, egg trays, excellent acidic, rose and copper clean.

For Use in Automatic Washers: 1-2% solution (2 to 4 mL/L) depending on the soil level. Acid Tray Wash EVO is especially effective for use in automatic washers. Corporation Representative in your area.

For Descaling Tray Washers: 4-6% solution (4 to 6 mL/L) without adding any lines to the wash cycle.

For Use as an Acidified Clean: Lines previously cleaned with a caustic rose cycle wash.

For Use in an Alternating Current: pending water hardness. In hard water keep machines and tools free of scale and detergent residue.

Acid Tray Wash EVO

Product Description

Acid Tray Wash EVO is an acidified, phosphate-free, non-foaming cleaner for washing trays, plastic chick boxes, egg cases, and filler flats in automatic tray washers. It is also an excellent acidic rinse and equipment descaler. **Northeast Laboratories, Inc found Acid Tray Wash EVO to contain <0.1 ppm total phosphorous and the formulation was readily biodegradable.**

Actives:	Glycolic Acid
Use:	Acidic non-foaming cleaner for automated tray washers or general farm use
Activity:	General cleaner, hard water scale, soap scum and mineral deposit remover
Application:	Automated tray washers or pressure washing equipment

Usage Rates

Task	Recommended Dilution
For use in automatic washers	0.25% - 0.75% solution
Descaling equipment	0.75% - 4.0% solution

Acid Tray Wash EVO

Product Performance Testing

Objective: To test the effectiveness of Neogen Acid Tray Wash EVO cleaner on three different surfaces.

Cleaning Test for:	Acid Tray Wash EVO Lot No. 325280
Cleaner Dilution:	1 oz/gallon
Cleaner Contact Time:	10 minutes
Rinse Time:	1 minute

Results

Surface Type: Stainless Steel							
Before Cleaning					After Cleaning		
Sheet #		Weight of clean sheet (g)	Weight of dried dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet, dried (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	R1	121.8	126.0	4.2	122.0	0.2	95.2
2	R2	102.9	106.7	3.8	103.1	0.2	94.7
3	CONTROL	102.3	106.1	3.8	105.2	2.9	23.7

Surface Type: Plastic							
Before Cleaning					After Cleaning		
Sheet #		Weight of clean sheet (g)	Weight of dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	R1	53.0	55.6	2.6	53.1	0.1	96.2
2	R2	51.7	54.9	3.2	51.8	0.1	96.9
3	CONTROL	51.2	54.4	3.2	53.8	2.6	18.8

Surface Type: Tile

		Before Cleaning			After Cleaning		
Sheet #		Weight of clean sheet (g)	Weight of dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	R1	659.3	663.2	3.9	659.4	0.1	97.4
2	R2	659.9	663.9	4.0	660.0	0.1	97.4
3	CONTROL	658.9	664.4	5.5	663.5	4.6	16.4

Conclusion: Acid Tray Wash EVO met the cleaning effectiveness criteria by removing more than 90% of dirt from all three surfaces tested.

Descaling Capabilities:

Objective: To test the descaling effectiveness (mineral removability) of Neogen Acid Tray Wash EVO cleaner.

Descaling Test for:	Acid Tray Wash EVO Lot No. 325280
Cleaner Dilution:	10% in water at 400 ppm hardness
Cleaner Contact Time:	20 minutes
Physical Observations:	Bubbles were evolving from the calcium blocks

Weights of Calcium Blocks	R1	R2	R3	Mean
Initial weight (g)	0.9155	1.1530	1.2046	1.0910
Final weight (g)	0.8282	1.0626	1.1239	1.0049
Difference (g)	0.0873	0.0904	0.0807	0.0861

Conclusion: Acid Tray Wash EVO, tested in triplicates with calcium blocks, met the specified weight loss of more than 0.08 grams. Hence, the product is satisfactory in its performance to demineralize calcium deposits from hard surfaces.



FARM-FOAM EVO

FOAMING ALKALINE CLEANER AND DESCALER

- Chlorine-Free
- Formulated with biodegradable detergents
- Superior degreasing capabilities
- Easy application and rinsing

NEOGEN

Net Contents: 1 gal. (3.79 L)



Components:

Sodium hydroxide
D-Glucopyranose, alginic acid
Alcohol, C₁₂-phosphate ester
Tetrasodium ethylene diamine diacetate
2,2'-imidazoline

Farm-Foam EVO is used for the removal of fat, grease, and other animal products from hutcheries, and other animal quarters, pens, and sties, as well as wash racks.

Recommended areas of use:
For Poultry Hutcheries: Use as a general purpose cleaner and degreaser for pens in the wash racks.
For Farm Premises: Use as a general purpose cleaner and degreaser for livestock barns, and as a wall cleaner for wash racks.

For Food-Processing Plants: Use in wash racks to clean and degrease equipment and meat processing and handling areas.

For Pressure Washing Applications: For use as a general purpose cleaner and degreaser for equipment. Use Farm-Foam EVO at a concentration of 1% (1 lb. to 100 gal. of water) for general cleaning and degreasing, or at a concentration of 2% (2 lb. to 100 gal. of water) for heavy cleaning and degreasing.

Farm-Foam EVO

Product Description

Farm-Foam EVO is a phosphate free, foaming, alkaline cleaner used for the removal of organic soils, especially fats and grease. **Farm-Foam EVO** is ideal for the removal of fecal material and soil in swine and poultry premises, hatcheries, and other animal confinement facilities. Farm-Foam EVO removes dirt, grime, protein, and oils, as well as minerals and adherent films. **Northeast Laboratories, Inc. found Farm-Foam EVO to contain <0.1 ppm total phosphorous and the formulation was readily biodegradable.**

Actives:	Sodium Hydroxide
Use:	Alkaline Foaming Cleaner
Activity:	General cleaner, deodorizer, and wetting agent
Application:	Foaming equipment, pressure washing, or manual application

Usage Rates

Task	Recommended Dilution
For general purpose, food processing applications, or farm premise use	0.25% - 0.75% solution
Foaming applications	0.75% - 2.5% solution

Farm-Foam EVO

Product Performance Testing

Objective: To test the effectiveness of Neogen Farm Foam EVO cleaner on three different surfaces.

Cleaning Test for:	Farm Foam EVO Lot No. 325281
Cleaner Dilution:	3 ounces per gallon
Cleaner Contact Time:	10 minutes
Rinse Time:	1 minute

Results

Surface Type: Stainless Steel							
Before Cleaning				After Cleaning			
Sheet #		Weight of clean sheet (g)	Weight of dried dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet, dried (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	R1	121.6	124.7	3.1	121.8	0.2	93.5
2	R2	120.6	123.3	2.7	120.7	0.1	96.3
3	CONTROL	102.3	106.1	3.8	105.2	2.9	23.7

Surface Type: Plastic

Sheet #		Before Cleaning			After Cleaning		
		Weight of clean sheet (g)	Weight of dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	R1	51.4	56.1	4.7	51.6	0.2	95.7
2	R2	53.5	57.0	3.5	53.7	0.2	94.3
3	CONTROL	51.2	54.4	3.2	53.8	2.6	18.8

Surface Type: Tile

Sheet #		Before Cleaning			After Cleaning		
		Weight of clean sheet (g)	Weight of dirty sheet (g)	Weight of dirt (g)	Weight of cleaned sheet (g)	Weight of dirt remaining (g)	Percent of dirt removed
1	R1	658.2	663.0	4.8	658.2	0.0	100.0
2	R2	659.4	665.4	6.0	659.4	0.0	100.0
3	CONTROL	658.9	664.4	5.5	663.5	4.6	16.4

Conclusions: Farm-Foam EVO met the cleaning effectiveness criteria by removing more than 90% of dirt from all three surfaces tested.



Foaming Rotation

Chlor-A-Foam EVO	3 weeks
Acid-A-Foam EVO	1 week



Tray Wash Rotation

Chlorinated Tray Wash EVO	3 weeks
Acid Tray Wash EVO	1 week

Support the World we Live in



NEOGEN[®]

800-621-8829 (USA /Canada) or 859-254-1221
inform@neogen.com | animalsafety.neogen.com

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