Nu-Calgon Application Bulletin 3-102

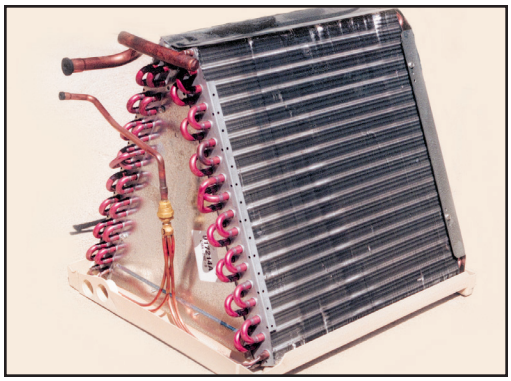
Help your business address the important issue of Indoor Air Quality with the 4-Step IAQ ASSURANCE PROGRAM

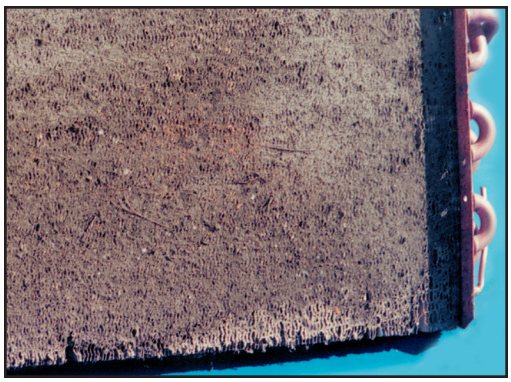
1. **CLEANING** restores design efficiency, reducing energy costs and threats to air quality.
2. **PROTECTING** enables the coil to stay cleaner for longer periods of time, and it makes the next cleaning easier.
3. **CONTROLLING** bacteria growth assures optimum air quality.
4. **PREVENTING** future growths of bacteria or bio-fouling assures system integrity.



The 4-Step IAQ Assurance Program for Air Conditioning & Heating System is based on Nu-Calgon's 60 years of experience!

A home or building's air conditioning system greatly affects Indoor Air Quality (IAQ), and the system's evaporator or indoor coil has the most impact. It provides cooling by absorbing heat and dehumidifying the air as it passes over it. But, because the air moving across the coil usually contains dust, dirt, pollen, moisture, etc., the coil will get dirty. In addition, the coil as well as the condensate pan, can become fouled with pollen, bacteria, mold spores, etc. This will reduce the quality of the air within the home or building and the result of this is more costly and damaging than you would suspect. Implementation of the **4-Step IAQ Assurance Program** will keep the equipment operating efficiently, increasing the comfort and indoor air quality of the building or home.





Dirty evaporator coils reduce available cooling & quality of air inside the building. Along with restricting air flow and reducing heat transfer, the moisture combined with dust, dirt, pollen, and other pollutants becomes an excellent breeding ground for biological growths like bacteria, mold and mildew. These are the primary sources of indoor air quality problems and odors. As the air continues to flow across the coils and circulate throughout the building, its quality is compromised.

Nu-Calgon
2611 Schuetz Rd. • St. Louis, MO 63043 • 800-554-5499 • www.nucalgon.com
Calgon is a licensed trade name • (1018) 3-102

1. CLEANING

Cleaning is the first step of the IAQ Assurance Program and probably the most important. Use one of the following Nu-Calgon products to clean the evaporator and restore the equipment's designed capacity and power efficiency.



Evap Pow'r®
A "no rinse" product formulated for cleaning evaporator coils. It is metal-safe and it cleans and emulsifies even the most stubborn soils and deposits. Evap Pow'r-C is available in a concentrated form. Biodegradable. USDA Approved.



Evap Foam® No Rinse
A high performing, heavy duty detergent. It is formulated with special surfactants and alkaline cleaners that have been developed into a foaming, no-rinse product. Evap Foam is ideal for use on most coils, but it is particularly suited for use on cooling or evaporator coils. Can be sprayed either right side up or upside down.



EPA Registered to Clean & Disinfect

Evap-Fresh™ No Rinse Evaporator Coil Cleaner & Disinfectant
A ready-to-use, "no rinse" cleaner and disinfectant for evaporator coils. It effectively cleans as well as kills mold and bacteria. This one-step disinfectant cleaner is perfect for air conditioners, commercial air handling units, HVAC cooling coils, refrigeration equipment and evaporator coils. EPA registered specifically for use on HVAC equipment.



CalClean®
An alkaline detergent formulated for cleaning evaporator coils, air-cooled condenser coils, metal filters, fan blades and other surfaces soiled with greasy dust and dirt. Biodegradable. USDA Approved.



Tri-Pow'r® HD
An outstanding general purpose coil cleaner, providing detergency and degreasing as well as deodorizing capability. Its positive emulsion technology is very effective versus oily grime as it converts the deposits into a more fluid or liquid form that can be easily rinsed away. It is non-acid, non-toxic and biodegradable.

CLEANING CONT.



Evap-Green™
Evap-Green's outstanding cleaning ability will quickly remove dust, dirt, and debris that is typically found on evaporator coils. By using Evap-Green, a natural cleaner, the coil is being cleaned with the most environmentally friendly product available on the market. Biodegradable.



Cal-Brite®
A low pH cleaner developed for cleaning evaporator coils, air-cooled condensers and other finned cooling and heating coils. Based upon glycolic acid and other ingredients, including the unique surfactant, Merpol®. Moderate foaming, brightening, and is safe for indoor and outdoor use.

2. PROTECTING

Once the coil is cleaned, the equipment will be running at designed performance levels. However, the causes of the dirty coil- dirt, dust, grease, insects, pollen, etc.-remain at large. As a result, the coil should be protected or shielded from these contaminants. This can be done with **Cal-Shield™**, a coil protectant technology. Cal-Shield will repel moisture, helping to prevent dirt, dust and grime from adhering to the coil, enabling the coil to stay cleaner longer. In addition, its use will make the next cleaning job much easier.

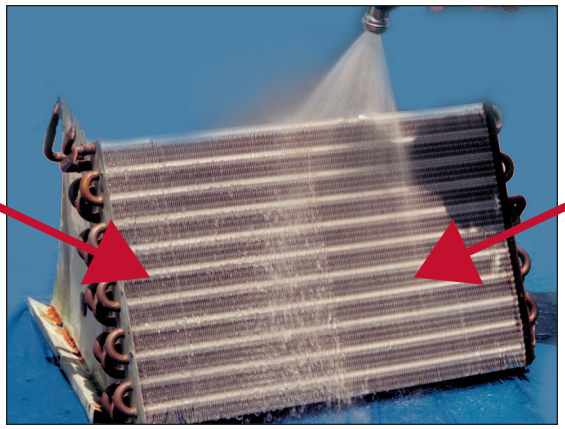


Cal-Shield also protects coils from aggressive environments like salt air, food acids, and other airborne corrosives. This all-important protection can be field-applied with safety and ease, and certification of its application can be provided.

Cal-Shield is safe to use, and because it is a molecular film, it has no effect whatsoever on heat transfer. It is made of food-grade materials, making it safe for most applications, including walk-in coolers.

Treated

Moisture "beading-up" and quickly running off



Untreated

Moisture "planes" on the fins, enabling dirt to adhere

3. CONTROLLING

Exhaust fans, coils, drain pans and air handling systems can become sites for bacterial colonization if not properly treated. This can lead to problems associated with SBS (sick building syndrome) or “dirty sock” odor. The best way to prevent this from occurring is to treat these areas with **Bio-Fresh® cd or Evap-Fresh™**.



Bio-Fresh® cd

A ready-to-use product, is a bacteriostat, fungistat and deodorizer based upon chlorine dioxide technology. It is recommended for control of bacteria, mold, mildew, fungi and yeasts in IAQ applications. It is safe for spraying in occupied space. Its EPA registration includes application to HVACR ventilating equipment, including coils, condensate pans, filters and duct-work. It has also been tested and found to be effective against Legionella bacteria.

The Bio-Fresh® Fogger

Made of a one-piece, seamless heavy-duty copolymer with a 48″ flexible hose that is adjustable from 0-18 ounces per minute with the respective particle size at 20 to 80 microns. It’s ideal for using Bio-Fresh cd when spraying large areas or ductwork.

Evap-Fresh™ No Rinse Evaporator Coil Cleaner & Disinfectant

A ready-to-use, “no rinse” cleaner and disinfectant for evaporator coils. It effectively cleans as well as kills mold and bacteria. This one-step disinfectant cleaner is perfect for air conditioners, commercial air handling units, HVAC cooling coils, refrigeration equipment and evaporator coils. EPA registered specifically for use on HVAC equipment.

4. PREVENTING

One location in the system that is most prone to the build-up of bacterial slime is the condensate pan. As condensate is collected in the pan, it can become a breeding place for harmful bacteria. This build-up can cause odor as well as plugged drains and overflows, which in turn can cause water damage. Nu-Calgon has three products to prevent this from bacteria slime building-up in the condensate pans of systems and causing these problems.



The first solution is **GelTabs™** condensate pan treatment. They are formulated with a breakthrough gel locking technology for treating air conditioning drain pans and lines, and will keep the drain pan from clogging and eliminate foul, musty odors. When activated by condensation, the tablet will turn to gel and lock into place. This ensures that the tab will not move and potentially block the drain. They are designed to completely dissolve at an even rate, leaving nothing to remove when the product is done working.

The second solution is **PanPads®** condensate pan treatment. It is a quarternary-based biocide that is formulated and enclosed in a plastic housing. This allows immediate and controlled release of the powerful biocide that will prevent growth of harmful bacteria.

Pan-Treat™ is the third option to control odor, build-up of sludge, and other accumulations. Pan-Treat is formulated with ingredients proven effective in cleaning and preventing these deposits. Pan-Treat is extremely easy to use, and is safe, non-corrosive, non-toxic and biodegradable. It is completely soluble in water without forming any deposits in the pan or drain and can be used in humidifiers too.