Recent Selected Press-releases by SteriBeam:

Press-release #1-August 2014: "Non-Invasive disinfection of spice, teas and powders in a vortex flow around UVC lamp".

SteriBeam Systems has developed a pilot UVC system for the sanitation of spices and powders in a vortex flow. Results with customers show 1 to 2 logs reduction at energy costs of about 100-450wh/kg (5-20c/kg). Energy costs are determined by a specific surface of samples, reachable by UVC light. It is very large for powders, lesser for seeds or shred teas. Example, the specific surface of 1cm³ is 6 cm², whereas the full specific surface of 0.1mm cubes filled in the same 1cm³ cube, is 600cm². UV doses increase proportionally with a surface to treat, so the smaller powder sizes the longer exposure and energy costs. A large size of surface can be off-set by a partial UVC transparency for some shreds or powders. Vortex flow provides a very effective mixing end exposure for each powder particle or shred combined with a possibility to control the UVC transparency of a product flow. The same cannot be reached with a forced mixing of powder layers on a "vibrating" conveyer under same UVC lamp. This was checked at the same UV power consumption. The method has no side effects except some products bleach to various degrees. For many shred or powder products it is a choice of a non-invasive sanitation.
The method can be used for vitamin D2 enrichment (x100x-x1000´s) in mushroom powders.
New customers are invited to test their products for modest fees to cover our bio-analysis (TPC) and the system usage. Tests are necessary since each spice, tea or powder is unique in its properties to the UV light and have various bio-loads. Therefore each vortex UV sanitation is individual.

The movie on how it works please see on our storefront of New Food Magazine (UK):
http://www.newfoodmagazine.com/directory/company-details/?c=321-steribeam

Please contact SteriBeam Systems to find out more.

Press-release #3-2013: Pulsed vs. Continuous UV for in-line Sterilization or Sanitation.

For high speed in-line sanitation of cups, lids etc (max to 99.99%, 3000 cups /h) the optimal UV equipments are U-shaped amalgam low pressure Mercury vapor lamps. Sterilization (6 logs, 99,9999%) at the same or at lower production rates (e.g. ca. 1000 products/h) requires pulsed UV light systems. The selection method is illustrated by results and data from manufactures. Using Pulsed Light for sanitizing cups, lids and packs causes unjustified high capital losses (1 to 25) and high operating losses per cup or lid (1 to 8). Yet pulsed UV (PL) becomes the only non-invasive sterilization choice for infusion solutions, reviewed for packed in 0.25 l UV semi-transparent PE bags, reaching 0.27 c/bag in operating costs INCLUDING 6 logs reduction of B. Pumilus spores, the most radiation and UV resistant spores of all. This result is not possible with amalgam lamps. The use of in-line Pulsed Light is also advantageous to amalgam lamps both for sanitation and sterilization of open or PE packed food or pharmaceutical products. SteriBeam offers both choices of lamps for its UV tunnels. Details are in our White paper of May 2013.

Press-release #2-2013, April 8: novel R&D PEF systems from SteriBeam:

For R&D in non-invasive sterilization of liquid foods, juices and pharmaceutical liquid products, as well as for extraction of nutrients from vegetative cells, SteriBeam developed novel bench-top semi-automatic and fully automatic PEF (pulsed electrical

field) systems. These systems have many advantages as to conventional PEF systems. One is having two processing chambers: one for liquids and another one for shred and jell products, as well as for meats tendering. Another advantage is a wide range of variable operating parameters: strength of electrical fields, pulse energies /pulse currents, pulse durations, pulse shapes and pulse repetition rates. Its values range from the most common to the latest most advanced pulse parameters. Such a versatile PEF system will present an opportunity for a researcher to get on the cutting edge of the PEF technology in finding optimal operating parameters for non-invasive sterilization or extraction for pilot or industrial PEF installations. These R&D PEF systems are the least expensive on the market, yet have the highest performance to price ratio.

Press-release #1-2013, Feb. 26: PUV sterilization Tunnel from SteriBeam:
"SteriBeam Systems GmbH, Kehl, Germany introduced fully automated in-line Pulsed UV Sterilization Tunnels for pilot and production lines. Tunnels are equipped with Intense Pulsed UV flash lamps, have UV transparent conveyer and capable to sterilize the entire product surfaces with the reduction from bacteria and spores for up to 6 log (1: million). The pulsed UV exposures can be set from an interactive display by installing pulse bursts with selected pulsed energy and a number of pulses per a product. It can sterilize surfaces of open products and also products wrapped in UV transparent foils at the rate of up to 1000 products/h sterilizing it both from the top and bottom (360° UV exposures).
The basic sterilization tunnel from SteriBeam has two PUV lamps, a small footprint of 120 x 80 cm, requires max 2kw of electrical power, can be fed from a single phase electrical line. Priced competitively, PUV tunnels from SteriBeam is an excellent alternative to installing PUV or UVC lamp modules on production lines. PUV Tunnels can be adapted to customer specific requirements. Installation of an in-line fully automated sterilization Tunnel assures a smooth product flow and guaranteed performance".

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Gottlieb-Fecht Str. 32,
D-77694 Kehl-Kork am Rhein
Tel. Direct: (+49) 07851 - 99 47 68 13;
Secretary: (+49) 07851 - 99 47 68 14;
info@steribeam.com www.steribeam.com