Introduction to Biochemical Hydrolysis - SB 5387/HB1700

What is Biochemical Hydrolysis

➢ Biochemical Hydrolysis is a totally natural process and acts much like our human digestive system.

➢ We humans use a pH of 8 to break down our food and the AH uses a pH of 14, plus heat and water to speed up the reaction.

➢ All body constituents including DNA are broken down into the basic organic molecules.

➢ This reaction is similar to physiological reactions of protein degradation occurring naturally in every cell of our body.

➢ This reaction converts proteins, nucleic acids and lipids in all tissues and cells of the body into aqueous solution of small peptides, amino acids, sugars and soaps.

➢ The process is environmentally friendly and does not produce toxic gases or other environmental pollutants.

Dignified Process

➢ There is no difference in the funeral ceremony for traditional cremation (direct flame) or Biochemical Hydrolysis until the body is committed from view.

➢ Biochemical Hydrolysis process is no more or less dignified than the other methods of disposition.

➢ Pulverization of cremated remains (into bone ash) is required for both traditional cremation and Biochemical hydrolysis.

Water Consumption

➢ The amount of water used in the process (approximately 120 gallons) is miniscule compared to that processed in treatment plants on a daily basis.

➢ The effluent solution is easily mixed with other suitable “gray water” entering the local treatment plant.

➢ The concentrated effluent is considered sterile and benign but it is not suitable for reuse until treatment by a water reclamation plant.

➢ No one should consider any wastewater consumable without reasonable treatment.

➢ However, with reasonable treatment, the bio solution liquid would be suitable for watering plants and other similar applications.

➢ The water is not lost forever but instead is recycled once it is treated.

Discharge of Bio-Solution

➢ The effluent will be released to a water treatment facility for biological treatment.

➢ The water treatment plants are specifically designed to treat liquids of organic origin and as such are well suited to treat the bio solution effluent.

➢ The bio solution is sterile and is only slightly high in pH.

➢ All pathogenic microorganisms are destroyed (Viruses, Prions, Bacteria and Fungus).

➢ The effluent from the process will never be directly released to rivers, streams, oceans or any other water

course.

➢ All body constituents including DNA are broken down into the basic organic molecules from which they were formed.

➢ There are no body parts contained in the discharged effluent.

➢ Seldom would any liquids discharged from public/industrial sources be considered safe to drink until processed at the water treatment plant.

➢ As far as the pH is concerned this is not a real issue since It can be reduced further if required prior to release.

➢ In addition, the chemical used (KOH) that imparts the higher pH is a chemical often added to drinking water in small amounts by potable water treatment plants to increase acidity.

Traditional Burial and Traditional Cremation

➢ These two forms of final disposition do not guarantee a safe planet.

➢ With traditional burial….over time bodily fluids can leak into the ground water.

➢ With traditional cremation, the body fluids will condense and fall back to earth via precipitation.

➢ Each process involves a different route but both end up as part of nature's water cycle.

Consumer Perspective

➢ Final disposition is a consumer choice.

➢ It offers users an environmentally-friendly alternative to traditional cremation.

➢ The biochemical hydrolysis process is no more or less dignified than the other methods of disposition.

➢ There is no difference in the funeral ceremony for direct flame cremation or Biochemical hydrolysis until the body is committed from view.

➢ As with traditional cremation a wooden rental/transfer casket can be used for the purposes of the ceremony and viewing.

➢ Unlike traditional cremation a wooden casket is not used in the biochemical hydrolysis process. Instead a silk or wool container is used further reducing carbon emissions to the atmosphere.

➢ Pulverization of cremated remains (into bone ash) is required for both traditional cremation and for biochemical hydrolysis.

The Family Perspective

➢ Biochemical hydrolysis is an environmentally friendly form of final disposition.

➢ The process meets or exceeds the Center for Disease Control (CDC) national standards for the destruction of all human pathogens.

➢ During the dissolution process, heat, pressure, water and potassium hydroxide are used to dissolve the human tissue and the consumable container.

➢ After the wet process is complete, the sterile liquid solution is cooled and released in accordance with local environmental regulations.

➢ A hot water rinse is then applied to the cremated remains which are then dried, crushed, pulverized, or

ground to facilitate inurnment or scattering.

➢ The process itself is no more or less dignified than the other methods of disposition.

➢ There is no difference in the funeral ceremony for biochemical hydrolysis until the body is committed from view.

Key Energy and Environmental Benefits

➢ Although there are CO_2 emissions resulting from the BIO Cremation™ process (generating steam for heating), these are significantly less than for traditional cremation.

➢ The BIO Cremation™ process operates at significantly lower temperatures than traditional cremation which prevents the mercury from vaporizing (The amalgam is separated in solid form at the end of the process).

➢ The BIO Cremator can be installed in built-up commercial and/or residential areas without creating a nuisance or hazard to the surrounding population, something which would be strictly forbidden with traditional cremation due to strict zoning regulations.

➢ Both biochemical hydrolysis and high temperature combustion have been proven to be highly efficacious in the destruction of all pathogens, bacteria and viruses.

➢ Studies have shown that the corresponding wet and dry heats and exposure times involved in both processes ensure that the resultant products from each are sterile.

For more information, please contact:

Kathy Long
Executive Director
People's Memorial Association
206-325-0489 option 1
director@peoplesmemorial.org