

# A Comparative Analysis of Contemporary Methods of Final Disposition

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## Abstract

This article illustrates the procedural specificities of the following eight contemporary methods of final disposition: (1) Natural Organic Reduction, (2) Alkaline Hydrolysis, (3) Plastination, (4) Body Farm, (5) Cryonics, (6) Memorial Reefs, (7) Organic Burial Pods, and (8) Space Funeral. After comparing the differences in the duration of body-processing time of all eight methods, Alkaline Hydrolysis was determined to take the shortest length of time to complete (6 - 8 hours), while Plastination was deemed to take the longest length of time to complete (1 year). Additionally, with regard to comparing the differences in cost to the consumer, Plastination and Body Farm were both deemed to be of the lowest cost (\$0/body donation only), while Cryonics was deemed to be the most expensive (\$200,000+ due to ongoing subfreezing storage and maintenance fees). Finally, after comparing the differences in each state's set of sanctioned methods of final disposition, it was established that the seventeen states that restrict their residents' options the most, permitting only two out of the eight contemporary options, include Alaska, Arkansas, Delaware, Indiana, Iowa, Kentucky, Louisiana, Massachusetts, Mississippi, Montana, Nebraska, New Hampshire, New Mexico, Pennsylvania, Rhode Island, South Dakota, and Wisconsin, and that the two states that restrict their residents the least, permitting six out of the eight contemporary options include California and Florida.

## Keywords

Mortuary Science, Biological Decomposition, Chemical Decomposition, Thanatology, Death Studies, Body Disposition

## 1. Introduction

Currently, the most common means of body disposition are those of cultural

custom and religious tradition. They include in-ground burials, entombments above ground in wall crypts, tombs, or mausoleums, and cremations in which ashes are either spread, placed in urns to be taken home by loved ones, or placed inurns to be interred within columbarium niches. However, the death care industry has become more pioneering in recent times so that the soon-to-be dearly departed can choose from more innovative, modern options of the disposition of their bodies prior to their demise. Burial land and entombment structures are becoming scarce in many locations as cemeteries overcrowd. In addition, concerns are rising regarding not only the pollutant nature of embalming fluid seeping into our soil and water, but also regarding cremation-related toxicities infiltrating our air. This article will define the following eight nouveau, eco-friendly methodologies of final disposition: (1) Natural Organic Reduction, (2) Alkaline Hydrolysis, (3) Plastination, (4) Body Farm, (5) Cryonics, (6) Memorial Reefs, (7) Organic Burial Pods, and (8) Space Funeral, offering the procedural specificities and time duration of each, providing pricing comparisons for each, and providing an assessment of state sanctions regarding each.

## 2. Composting the Dead

Natural Organic Reduction (NOR) is a contemporary, green method of body disposition that involves composting a human corpse into soil. The process, from start to finish, takes anywhere between four and six weeks. “NOR is based on the principles of livestock mortality composting, in which farm animals are returned to the land as soil” [1]. The composting of the remains of sheep and goats has been a norm in the world of agriculture for the last few decades. “While the process has been done with animals throughout farming communities, the concept of processing a human being is fairly new” [2]. As of current, no bodies of notable individuals have undergone NOR.

The course itself begins with the transporting of a human corpse to an NOR facility to be “kept onsite in cold storage until it is time for their ceremony and/or vessel placement” [3]. When the decedent’s loved ones arrive at the facility, the NOR process begins with the corpse being removed from cold storage, being “shrouded in organic cotton, and then covered with woodchips, straw, carbon-rich alfalfa and other plants” [2]. If a ceremony is to take place, attendees may partake in further covering the corpse with more plant-matter provided by the NOR facility. Afterward, it is put into one of the reusable, stacked containers called “vessels” where air is thrust through. “This facilitates the microbes, which already exist on the body and on the plant matter, to break down the corpse” [2]. “Staff rotate each vessel at several points during the process to ensure thorough aeration and decomposition, which helps to break up any remaining bone fragments and teeth” [3]. If bones that are larger, such as femurs, are present after the aeration period, they are physically pulverized in a cremulator as they would be in the case of traditional flame cremation. Any material considered non-organic is retrieved and removed. Items such as silicone breast

implants are disposed of, and items such as hip replacement implants are set aside to be recycled. At this time, the “secondary curing for an additional 30 days to stabilize the remains to a soil-like consistency” [4] occurs. “The composted material is tested to ensure that the resulting soil levels are in accordance with state environmental laws” [2]. Once the body has been completely transformed to compost, it is deemed soil and can be spread in a private garden, forest, or conservation land site.

With regard to cost to the consumer, death care industry professionals advise that parties interested in NOR should be informed that human composting services cost \$7000 if pre-paying for end-of-life services [3]. “Natural Organic Reduction (NOR) is only legally available in six states” [5]. The six include California, Colorado, New York, Oregon, Vermont, and Washington.

### 3. Dissolving the Dead

The method of body disposition that involves the dissolving of the corpse into liquid is known as Alkaline Hydrolysis. The procedure is also referred to as “water cremation, flameless cremation, green cremation, wet cremation, chemical cremation, aqua cremation, hydro cremation, liquid cremation, aquamation, or resomation” [6]. Like Natural Organic Reduction, Alkaline Hydrolysis is also considered an environmentally-friendly methodology. Because of this, it was chosen as the means of final disposition by the Nobel Peace Prize-winning human rights activist and environmentalist, Desmond Tutu. Tutu’s body was aquamated in December of 2021.

The course begins with laying a corpse onto a cot. The cot is “inserted into the large vessel and sealed, then a solution of 95% water and 5% strong base (sodium hydroxide and/or potassium hydroxide) are introduced. Moderate temperature (177C or 350F) and fluid flow accelerate the natural reduction of soft tissue to its elements” [6]. The solution is essentially lye and the sealed vessel works much like a washing machine. At the end of the cycle, what remains are bone and “inert liquid rich with peptides, sugars, amino acids, and captured carbon which is harmlessly released into the wastewater system” [6]. This liquid appears as soapy, frothy fluid. The dissolved remains are not noxious in the least. As in the case of NOR and traditional flame cremation, bones remaining after Alkaline Hydrolysis are pulverized in a cremulator as well. The duration of the entire course runs anywhere between six and eight hours.

Regarding consumer cost, death care industry professionals advise that Alkaline Hydrolysis services costs anywhere from \$1,295 to \$3,995 [7]. Alabama, Arizona, California, Colorado, Connecticut, Florida, Georgia, Hawaii, Idaho, Illinois, Kansas, Maine, Maryland, Minnesota, Missouri, Nevada, New York, North Carolina, North Dakota, Oklahoma, Oregon, Tennessee, Utah, Vermont, Virginia, Washington, West Virginia, and Wyoming are the only twenty-eight states that have legalized Alkaline Hydrolysis as a means of final disposition for their residents.

## 4. Preserving the Dead

Plastination was invented in 1977 by Dr. Gunther Von Hagens and has since been perfected to reserve anatomical samples for the purpose of teaching via the utilization of true and real preserved specimens. Originally, Dr. Von Hagens, sought a patent in his homeland of Germany for the preservation of animal and vegetable tissues by synthetic resin impregnation. Decades later, we are now in the day and age of permanently preserving the human body in the form of silicon plastinates. The process does not involve encasing a human body in silicon, but instead “plastination is an anatomical technique for preserving biological tissues based on the principle of replacing body fluids with a curable polymer” [8] which hardens, allowing the specimen to be preserved permanently. Human silicon plastinates are completely odorless and do not pose any health risks to the living who handle and/or study them, as they are purchased by “universities, hospitals, schools, and museums” [9] for educational purposes. Plastinates hold an extremely great value didactically. As of current, no bodies of notable individuals have undergone plastination.

The plastination course involves a six-step process which takes approximately one year from start to finish. It begins with fixation. Fixation involves the pumping of formaldehyde, a bacteria killer and decomposition inhibitor, through the arteries. The second step involves anatomical dissection in which skin and fatty tissue are removed. During the third step, soluble fat and water are dissolved by the body being placed in a bath of freezing acetone. Step four is known as forced impregnation. This step involves immersing the corpse in “a bath of liquid polymer such as silicone rubber, polyester, or epoxy resin” [9]. A vacuum is created and the acetone from the previous step exits the cells while sucking in the polymer so that each and every cell is penetrated with it. Step five is the placing stage, as “after vacuum impregnation, the body is still flexible and can be positioned as desired. Every single anatomical structure is properly aligned and fixed with the help of wires, needles, clamps, and foam blocks” [9]. Finally, step six involves curing in which heat, light, or gas are used to harden the specimen and to prevent decay.

With regard to cost, “NBC News reports that plastinating a whole body costs between \$40,000 and \$60,000” [10]. With regard to consumer cost, it is free of charge, as “the only way to be plastinated after death is to donate your body to an organization that plastinates” [10]. In the United States, plastination laboratories that process human bodies exist in six states, specifically at Union University (Tennessee), University of Toledo (Ohio), Eastern Virginia Medical School, the Fascia Research Society (Minnesota), Grand Valley State University (Michigan), University of Arizona, and University of Minnesota.

## 5. Exposing the Dead

“The University of Tennessee Forensic Anthropology Facility was the original body farm which was opened for student research on-campus by Dr. William

Bass in 1971. Bass recognized the need for research into human decomposition after police repeatedly asked for his help analyzing bodies in criminal cases” [11]. Body farms are designated, outdoor areas within a university’s property line where human bodies are laid to naturally go through normal post-mortem changes so that students are able to keep descriptive logs of each stage of decomposition. Sometimes observations can begin as early as the pallor mortis stage (if the decedent died nearby the body farm), and these observations run all the way through to skeletonization. Stage by stage, students are able to acquire information on the corpse’s release of gasses, color changes, liquification, and the like. Students even learn to determine time of death by examining the infestation of larvae after fly eggs hatch in the orifices of the corpse using forensic entomological techniques. “External factors may accelerate or retard decomposition” [12]. Therefore, students also learn how environmental temperature, body position, and hungry wildlife may affect the state of a corpse left in the elements. In addition, students practice maintaining the chain of evidence when working with the bodies because in a criminal case, it is crucial that anybody who so much as touches the corpse must sign a log indicating that he has handled the body. It is pertinent so that no legal questions can be asked about the body’s integrity and/or possible breaches in the body’s custody. The most notable donation to the body farm was the cadaver of renowned American anthropologist, Grover Krantz, who not only worked as a professor, but also as a cryptozoologist, researching Bigfoot and exclaiming his belief that the animal truly exists.

Essentially, the course of a corpse to be laid at a body farm is simple. In general, upon a body’s arrival, it is kept in a cold storage unit until all of the intake documentation is completed and processed. The refrigeration units for the corpses are comparative to units found within a morgue. Once the body is “assigned an identifying number and placed in a specific location on the grounds of the body farm” [11], the precise site of the corpse is geographically mapped. From here, nature takes its course and once all that remains are bones, “all skeletal remains housed in the collection are donated to the Forensic Anthropology Center” [13]. Of course, the duration of time that the entire decomposition process takes is dependent upon the elements and climate of that particular body farm. As soon as a loved one’s skeletal remains are “accessioned into the Donated Skeletal Collection” [13], family and friends may visit these skeletonized remnants at the Forensic Anthropology Center.

With regard to choosing a body farm as a means of final disposition, there is no cost to the consumer. Universities “will transport your body to our facility from a hospital, funeral home, or medical examiner office within 100 miles” free of charge [13]. In America, body farms exist in seven states at the following institutions of higher education: University of Tennessee, Western Carolina University (North Carolina), Texas State University, Sam Houston State University (Texas), Southern Illinois University, Colorado Mesa University, University of South Florida, and George Mason University (Virginia). However, “out-of-state-donations are accepted, although your body must be transported to the body farm by a funeral

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home or mortuary transport company at your own expense” [13].

## 6. Freezing the Dead

Cryonics is “the practice of freezing an individual who has died, with the object of reviving the individual sometime in the future” [14]. The Greek word “krýos”, which means “icy cold”, is from where the word cryonics was derived. This means of body disposition is not viewed as a means of final disposition at all by those who seek to utilize it. It is merely viewed as a method of holding one’s body in suspended animation. Suspended animation is normally a term used by mammologists when describing hedgehogs or bears in hibernation for the winter, but has been adopted by those believe in the potential success of cryogenics. Keep in mind that hedgehogs and bears who are hibernating are not dead by any means; their respiration and circulation are slowed, but have not stopped altogether. On the contrary, those whose corpses are brought to cryonics labs are indeed very much dead, and have been pronounced as such after a battery of tests by a practicing physician. There has never been a successful thaw and re-animation of a human being ever. Scientists are still having difficulties cryopreserving individual organs, let alone entire bodies. Organs currently cannot be harvested, frozen, thawed, and transplanted due to “nucleation and the ultimate size of the resulting ice crystals, as well as on the probability of fracture at or below  $T_g$ ” [15]. Nonetheless, cryonics clientele believe that the future of science will make a way so that they can cheat death and live again, re-animated in the future. The most notable individual whose body has been cryogenically frozen is Ted Williams, left-fielder for the Boston Red Sox, along with the body of his only son, John Williams.

The course of freezing a body begins directly after death is pronounced. The body is immediately “packed in ice and shipped to a cryonics facility” [14]. At the facility, the “blood is drained from the body and is replaced with antifreeze and organ-preserving compounds known as cryoprotective agents” [14] which supposedly prevent ice formation or crystallization. Once the body is in this vitrified state, it is submerged into a chamber full of liquid nitrogen. It takes between five and six days from when the body enters its chamber to get to the ideal temperature of  $-196^{\circ}\text{C}$  where it will remain.

The concept of cryonics is nothing new. The first three cryonics facilities in America were established in the 1960s, but by 1979, all had failed. Now that we live in a day and age of advanced methodologies and extraordinary scientific technologies, cryonics facilities are open with no sign of failure in sight. Currently, cryonics facilities are operating in the following states: Arizona, California, Florida, Oregon, and Michigan. The cost of freezing one’s body indefinitely begins at \$200,000 and may be much more depending on the facility chosen.

## 7. Sinking the Dead

Cremains no longer need to be scattered, taken home to be placed on a mantle,

or inurned in a columbarium niche. They can now actually become part of an underwater coral reef system. This method of final disposition “first began when diver Don Brawley and his college roommate Todd Barber, both with a passion for diving, decided to do something about restoring the declining health of coral reefs in the ocean” [16]. Each artificial memorial reef, derived from the ashes of the dearly departed, “serves as a home for coral, marine plants, shellfish, and even as an effective component in helping with extreme tide events” [17]. Memorial reefs have been established within many of the earth’s bodies of saltwater from the Silcer Memorial Reef beneath the waters off Merida, Mexico to the Veneto Memorial Reef beneath the waters off Venice, Italy. One most notable participant is legendary chef, Julia Child, whose cremains are a part of the Neptune Memorial Reef off the coast of Key Biscayne, Florida.

The course begins with a traditional flame cremation. After the cremation is completed, the decedent’s ashes are mixed with environmentally-friendly concrete and poured into a mold, to form what is known as a reef ball. The reef balls are then adorned, personalized with the decedent’s name, birth date, and death dates on a permanently affixed metal plaque. The reef balls are then sunk to the ocean floor, “establishing new habitats for fish and other sea life” [17]. The “process takes four days and includes the casting, the viewing, the dedication and placement on the ocean floor” [18]. Fish will be drawn to the reef ball as soon as it is installed onto the ocean’s floor, and the growth of marine plant life and coral often appears on the reefs in as short a time as a couple of weeks post-placement. “As these reef balls mature they become permanent additions to the marine environment, continuing to develop and support marine life forever, as once there it remains there in perpetuity as a memorial to the deceased. The transformation over the year ahead is impressive, as the collection of many reef balls together become an actual new reef which attracts ocean life, and provides a home for them to thrive, just like a natural reef” [19].

“The U.S. territorial sea extends 12 nautical miles from the baseline” [20] which mean that as of current, memorial reefs have only been established within the jurisdiction of the following states: New Jersey, Texas, North Carolina, South Carolina, Maryland, Hawaii, Florida, and California. What is the cost the consumer to forever become a part of a coral reef? “Depending on the company you choose to handle these services, placement in a memorial reef can range in price from \$2,000 to \$7,000” [19].

## **8. Planting the Dead**

“As people look for more environmentally conscious alternatives to traditional burial practices, one option has become quite popular: Tree Pod Burials” [21]. Tree Pod Burials, also known as organic burial pods, serve as a final disposition option for individuals who are seeking a green burial in which “no toxic chemicals are used, and only biodegradable materials are used” [22]. Essentially, organic burial pods allow a deceased individual to become one with a tree as the

natural process of decomposition ensues. As of current, no bodies of notable individuals have undergone a tree pod burial. However, the body of American actor, Luke Perry, has undergone a similar process. Perry was buried in a suit that had “a built-in ‘biomix’ made up of mushrooms and other microorganisms that help decompose the body, ‘neutralize toxins’ and transfer nutrients to plant life” [23].

With regard to tree pod burial, the course begins with a living person choosing the type of sapling with which they would like to become one after their demise. As of current, “the top five most popular choices are red maple, dogwood, flowering cherry, sycamore, and crepe myrtle” [24]. Once the individual dies, the nude body is wrapped in a natural fiber cloth and placed in the fetal position within an egg-shaped pod. The pod is composed of “biodegradable bio-plastic polymer” [25]. At this point, an in-ground burial of the occupied pod occurs with the roots of the chosen sapling directly above the pod in the soil. Over time, as “the biodegradable plastic shell breaks down, the remains provide nutrients to the sapling planted right above it” [25]. In other words, the decomposing body nourishes the sapling so that it may flourish into a strong, mature tree. Like body farms, the duration of this entire process, specifically the completion of decomposition, varies greatly depending on the elements and climate of the burial site. Families of the decedent can water the tree as they watch it grow, and many environmentalists look forward to the day that cemeteries look more like forests than acreages of headstones.

As pointed out by Raoul Bretzel and Anna Citelli, the designers of a popular, Italian brand of tree burial pods known as Capsula Mundi, “green cemeteries are popular in many countries, especially in the English-speaking countries” [26]. In fact, “currently, there are some 220 natural burial cemeteries in the US” [22], with at least one in every single state. In addition to those, many hybrid cemeteries exist in which prevailing, traditional cemeteries have sectioned off a portion of their land specifically for green burials like tree pod burials. “Organic burial pods like the Capsula Mundi or the Bio Urn can legally be used within the United States. However, each state has its own laws, rules, and regulations for natural burials” [27]. “Pod burials cost around \$2,500” [28], not including a funeral director’s fees if the specific state requires a funeral director’s involvement by law. It also does not include cemetery-related fees that range from the purchasing of the plot to the grave-digging services.

## 9. Launching the Dead

As already established with Memorial Reefs, cremains do not have to find a final resting place within an urn over a fireplace or within the confines of a columbarium. They could not only be stationed at the bottom of the sea, but could also literally be blasted out of the earth’s atmosphere into the great cosmos with what is known today as the Space Funeral. Many space-lovers have already taken advantage of the out-of-this-world final farewell including Star Trek actor James



Doohan who portrayed the character Montgomery Scott, known to most as “Scotty”. Star Trek creator, Gene Roddenberry, space physicist, Gerard K. O’Neill, rocket scientist, Krafft Ehrlicke, and the space-loving American writer/psychologist/Harvard University professor, Timothy Leary have all already had their cremated remains launched as well.

The course of the space funeral begins with a future decedent choosing the service that is desired. All services begin with a launch of the cremated remains into space and then include one of the following options: 1) Cremains are deployed at approximately 80 km from the earth’s surface, floating for 6 minutes in microgravity amongst the stars, and then descend back to the earth’s surface, 2) Cremains are deployed into Low Earth Orbit (LEO), orbit the earth from months to years, and then “reenter the earth’s atmosphere as a shooting star” [29], 3) Cremains are deployed via moon lander where cremains will remain on the moon’s surface for eternity, 4) Cremains are deployed “past the Earth-Moon system on its path to the deeper reaches of space” [29] where they will remain deeper into the far Milky Way ad infinitum. After the individual has passed away and the body has been cremated, the next of kin can order the memorial service box in the mail directly from one of the two existing space funeral companies, whether it be Beyond Burials or Celestis. Once the next of kin receives the box, the container provided can be filled with the decedent’s ashes and mailed back to the company. From there, the next of kin will be informed of a launch date according to the launch schedule, as space funeral spacecrafts “are a secondary payload aboard an already established mission” [29]. Launches are video-recorded and included in each service package.

Space funerals are considered eco-friendly, as they “are carefully designed so as not to create space debris” [29]. Residents of all fifty states can opt for a space funeral legally. Pricing for short missions and simple service begin at \$3,495, while longer missions into deep space with advanced service begin at \$12,995.

## 10. Methodology

All data was collected both qualitatively and quantitatively from the very companies that offer each of the specified death care services. All state regulations were verified via each specific state’s governmental website. Data was collected, charted, analyzed, and reviewed for comparison purposes.

## 11. Results

Each of the eight methods of body disposition offer a unique means of a final farewell, but state law limits one’s options as illustrated in **Table 1**. The seventeen states that restrict their residents the most, permitting only two out of the eight contemporary options, include Alaska, Arkansas, Delaware, Indiana, Iowa, Kentucky, Louisiana, Massachusetts, Mississippi, Montana, Nebraska, New Hampshire, New Mexico, Pennsylvania, Rhode Island, South Dakota, and Wisconsin. The sixteen states that permit three out of the eight contemporary options in-

clude Alabama, Connecticut, Georgia, Idaho, Kansas, Maine, Missouri, Nevada, New Jersey, North Dakota, Ohio, Oklahoma, South Carolina, Utah, West Virginia, and Wyoming. The nine states that permit four out of the eight contemporary options include Hawaii, Illinois, Maryland, Michigan, Minnesota, New York, Texas, Vermont, Washington. The six states that permit five out of the eight contemporary options include Arizona, Colorado, North Carolina, Oregon, Tennessee, and Virginia. The two states that restrict their residents the least, permitting six out of the eight contemporary options include California and Florida. Zero states permit seven out of the eight, and zero states permit all eight out of eight.

As shown in **Table 2** with regard to cost, the contemporary methodologies listed from least expensive to most expensive are 1) Plastination and Body Farm, both \$0 dollars, 2) Alkaline Hydrolysis, starting at \$1,295, 3) Memorial Reef, starting at \$2,000, 4) Organic Burial Pod, starting at \$2,500, 5) Space Funeral, starting at \$3,495, 6) Natural Organic Reduction, starting at \$7,000, and 7) Cryonics, starting at \$200,000.

As expressed in **Table 3** with regard to the duration of each contemporary methodology listed from shortest timeframe to longest time frame are 1) Alkaline Hydrolysis, 2) Memorial Reef, 3) Cryonics, 4) Natural Organic Reduction, and 5) Plastination. Duration for Body Farm, Organic Pod Burial, and Space Funeral all vary and cannot be pinpointed.

**Table 1.** Final disposition methods legal in each state of the US.

State	Natural organic reduction	Alkaline hydrolysis	Plastination	Body farm	Cryonics	Memorial reef	Organic burial pod	Space funeral
Alabama		X					X	X
Alaska							X	X
Arizona		X	X		X		X	X
Arkansas							X	X
California	X	X			X	X	X	X
Colorado	X	X		X			X	X
Connecticut		X					X	X
Delaware							X	X
Florida		X		X	X	X	X	X
Georgia		X					X	X
Hawaii		X				X	X	X
Idaho		X					X	X
Illinois		X		X			X	X
Indiana							X	X
Iowa							X	X
Kansas		X					X	X
Kentucky							X	X
Louisiana							X	X
Maine		X					X	X
Maryland		X				X	X	X
Massachusetts							X	X
Michigan			X		X		X	X

**Continued**

Minnesota			X	X				X	X
Mississippi								X	X
Missouri			X					X	X
Montana								X	X
Nebraska								X	X
Nevada			X					X	X
New Hampshire								X	X
New Jersey							X	X	X
New Mexico								X	X
New York	X		X					X	X
North Carolina			X		X		X	X	X
North Dakota			X					X	X
Ohio				X				X	X
Oklahoma			X					X	X
Oregon	X		X			X		X	X
Pennsylvania								X	X
Rhode Island								X	X
South Carolina							X	X	X
South Dakota								X	X
Tennessee			X	X	X			X	X
Texas					X		X	X	X
Utah			X					X	X
Vermont	X		X					X	X
Virginia			X	X	X			X	X
Washington	X		X					X	X
West Virginia			X					X	X
Wisconsin								X	X
Wyoming			X					X	X

**Table 2.** Costs of methodologies.

Methodology	Natural organic reduction	Alkaline hydrolysis	Plastination	Body farm	Cryonics	Memorial reef	Organic burial pod	Space burial
<b>Price</b>	\$7,000+	\$1,295+	\$0	\$0	\$200,000+	\$2,000+	\$2,500+	\$3,495 to \$12,995+ Depending Upon Destination

**Table 3.** Process length of each body disposition methodology.

Methodology	Natural organic reduction	Alkaline hydrolysis	Plastination	Body farm	Cryonics	Memorial reef	Organic burial pod	Space burial
<b>Duration of process</b>	4 - 6 Weeks	6 - 8 Hours	1 Year	Varies depending upon elements and temperature	5 - 6 Days	4 Days	Varies depending upon elements and temperature	Varies depending upon launch schedule

## 12. Conclusion

While, the most commonly utilized methodologies of final disposition are still in-ground burial, entombment, and flame cremation due to their link to customs of culture and religion-based tradition, the death care industry now offers revolutionary means. Natural Organic Reduction, Alkaline Hydrolysis, Plastination, Body Farm, Cryonics, Memorial Reefs, Organic Burial Pods, and Space Funerals are these very means. Each method comes with its own particular procedures, duration of process, cost, and legalities with regard to individual state laws.

## Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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