



Maceration As A Form Of Human Waste Disposal



Where bedpans and toileting aids must be used in care settings, single-use pulp products are widely regarded as the most effective way to control infection risk. However, doubts surrounding how the machines process effluent into the local sewerage system, as well as wider environmental and economic concerns, can prevent some facilities from implementing the practice.

Medical pulp macerators offer a reliable means to dispose of waste but, ironically, they also create it.

As opposed to washing and reusing a steel or plastic bedpan, the pulp equivalent can only be used once before it needs to be discarded. Although putting the item in a yellow bag for commercial disposal is certainly an option, the most sensible way to proceed is to put a pulp bedpan into a specifically-designed macerator.

A medical pulp macerator will make light work of both the pulp utensil and its contents, using a series of blades to pulverise the matter into a fine slurry and deposit the remnants into the normal sewerage system.

Macerators are engineered to produce waste which is of no detriment to internal plumbing or external sewage works. When properly used, a macerator should produce no more strain on infrastructure than a normal toilet.

The entire lifecycle of a pulp utensil is designed to be kind to the environment.

In order to provide an ecological solution, pulp products are made of eco-friendly recycled paper materials, to ensure that they don't contribute to deforestation.

Once the pulp item has been used and macerated, sewer pipes will transport the waste to a water treatment plant. The pulp is filtered out of the water into 'sludge' – which is then turned into agricultural fertiliser. As a result, the maceration process endeavours to take a holistic approach to sustainability.

Macerators are designed to only process items that fit in to this lifecycle. Just like a regular toilet, a macerator will block if you use it to dispose of items which aren't degradable, such as baby wipes or sanitary products. Use it properly, however, and there will be no detriment to the environment – or consequences for your internal plumbing.





With macerators being dependent on proper use to prevent breakdowns, should you be worried about costly maintenance issues caused by staff errors?

Care professions, in particular, experience a high turnover of staff. They also have the added challenge of having many members of staff for whom

English is not their native language. With this in mind it's essential that clinicians are properly trained to use all equipment as intended – including macerators.

Although staff training should of course be of high priority for all institutions, the modern macerator will bridge gaps with intelligent technology – such as audio instructions and lids that close automatically – to prevent common faults caused by overfilling or disposing of items that a macerator can't safely process.

If you're concerned about using a macerator because you perceive a bedpan washer to have less room for user error, it's worth weighing up the facts regarding maintenance and subsequent repair costs.

Macerators are often considered simpler to maintain than bedpan washers, with time spent purely on mechanical maintenance or repair, rather than on monitoring of performance¹.

If we are to further explore the effects of maintenance on your sluice room machinery, it can also be argued that macerators are far safer to use – most critically, because no reduction in performance will go unnoticed.

If a macerator failure occurs, it will reveal itself as a complete breakdown which requires an engineer's attention. Although this doesn't appear to be outwardly advantageous – nobody wants to experience downtime, after all – it's actually a safer outcome for your patients and clinicians. There are no lingering issues that will go beneath the radar; it's either doing its job as intended, or it requires attention – and either status will be obvious.

By comparison, bedpan washers which process reusable items can experience faults that are not 'complete' – for example, an issue with a partially blocked spigot or nozzle. When this occurs, the

¹ <https://www.ncbi.nlm.nih.gov/pubmed/10291899> J Inst Hosp Eng. 1989 Feb;43(1):14, 16-7.

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[Hickman B.](#)

reduction in service may go unnoticed for some time; which, of course, will present a significant infection control hazard.

Of course, we must approach this with balance and consider the fact that bedpans do not need to be sterile in order to be suitable for use. However, adequate disinfection is a must – and if you're not aware that disinfection is being compromised by a faulty machine, your patients are at significant risk of infection.

When purchasing new sluice room machinery, the two key factors that any facility will be keen to balance are cost and infection control.



Taking just a couple of minutes to process up to six pulp items (depending on the model), a macerator is a quick, simple and effective method of human waste disposal. However, the volume of pulp items to be purchased and stored can be of concern to facility managers – if you dispose of six bedpans, you of course need six more – and any one patient is likely to use several a day.

With budgets under exceptional amounts of pressure, one should not be tempted to regard macerators as an unaffordable luxury. Rather, you should weigh up the long-term value that a macerator is likely to provide.

The maintenance of a pulp macerator is likely to be more straightforward than that of a comparable machine, with maintenance issues that go unnoticed being a particularly slim risk.

They also use less electricity than washer disinfectors, presenting a saving on utility costs; meanwhile, the sheer effectiveness of a macerator in regard to infection control means that you will likely experience lifelong value.

The costs of managing an outbreak of infection can be astronomical, with the scale varying from small, containable events, to epidemics.

If a healthcare acquired infection (HCAI) erupts on just one ward, the price can be significant.

With the health of potentially numerous patients taking an unpleasant downturn, the cost to provide additional hands-on care is a considerable strain on already stretched resources. Beds will be

occupied for longer while recovery is hindered, and the amount of time clinicians will need to spend on auxiliary tasks will dramatically increase on top of normal duties.

Meanwhile, let's not forget that HCAs are not only a risk to patients. Clinicians are also exposed to infection risk, meaning that your existing workforce could find themselves unwell and unable to tend to the growing demands of the ward. The staff that remain able to do so will find themselves under incredible pressure, while the cost to supply covering workers will pick away at the last of your budget.

Unfortunately, it doesn't always end there. Most patients come to healthcare institutions to be treated for ailments and to recover; or when illnesses are chronic or age-related, to be cared for in comfort. Falling ill due to an infection acquired through this care is never considered acceptable and will often attract the bad press to match – outbreaks of MRSA, Clostridium difficile and E. coli are extremely unpleasant to endure, and their complications can even result in death.

It's not just a matter of conscience – when patients become ill due to preventable infections at the hand of medical professionals, your clinical reputation can end up in tatters, with CQC inspections and even facility closures adding to the crisis.

This is not a cheap affair for any trust or private establishment; therefore, the cost of adequate precautions will always provide the best value.



Bedpan washer disinfectator technology is extremely reliable and kills 99.9% of bacteria on reusable utensils. However, a disposable solution still offers distinct advantages.

Where reusable bedpans are the preferred waste management solution, good choices are not always made regarding cleaning and recirculation amongst patients.

Even though we know that cleaning bedpans by hand is dangerous – often spreading bacteria through splashing and aerosolisation, as well as being unreliable in terms of denaturing pathogens – many facilities will still resort to the practice where reusable utensils are in hand.

In fact, an International Federation of Infection Control (IFIC) survey found that, despite being advised to clean

and disinfect bedpans after each use, many clinicians would still do so only with water²; often in the patient's room or bathroom. This would be followed by a wipe, or spray, of disinfectant.

Despite knowledge of the risks, pressures of workload can cause clinicians to make less than ideal decisions – and in terms of infection control, this can have severe consequences. The most efficient solution for care staff, which allows them to save time while remaining compliant with infection control procedures, should be considered as a priority.

DDC Dolphin produce industry-leading pulp maceration technology, ready to handle the disposal of human waste with ease.

Exceptionally economical and simple to use, a pulp macerator from DDC Dolphin will expertly reduce cross-contamination of infectious materials, save clinicians' time and even reduce your budget spend with low operating costs.



Disposing of up to six pulp items in just 120 seconds, the DDC Dolphin [Pulpmatic Ultima](#) is suitable for even the busiest hospitals and care homes, with specialist performance that won't compromise on efficiency, water usage or noise levels.

Better yet, DDC Dolphin are proud to offer 360° Care Cover, which will provide you with not only a brand-new machine, but a complete maintenance package – all from just £129 a month.

Maceration is at the cutting edge of safe human waste disposal. [Contact DDC Dolphin today](#) to find out more.

For more information, please contact DDC Dolphin Marketing Director Zoe Holiday, 01202 731555, info@ddcdolphin.com, <https://www.ddcdolphin.com>

² Global practices related to handling of faeces and urine in hospitals - results of an International Federation of Infection Control (IFIC) survey, www.ijic.info/article/view/13605

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Notes For Editors

DDC Dolphin Ltd
The Fulcrum
Vantage Way
Poole
Dorset
BH12 4NU

T: +44 (0) 1202 731555

F: +44 (0) 1202 731666

W: <https://www.ddcdolphin.com>

E: info@ddcdolphin.com

DDC Dolphin is a leading manufacturer of infection control equipment for the healthcare sector. The company was founded in 1991.

DDC Dolphin safeguards patients and clinicians from infection by providing a complete sluice/dirty utility room solution for hospitals and care facilities.

The company manufactures, installs, maintains and audits pulp macerators, bedpan washer disinfectors, sluice room stainless furniture and consumable products. It has invested in anti-microbial coatings and hands-free technology to drive innovation in the sector.

