



## Treatment of hospital waste at the UMC of Utrecht

### Case Study

The UMC of Utrecht is a large university hospital based in the Netherlands, with a focus on extensive medical research. Each year, they generate more than 200 tonnes of infectious hospital waste, including needles, laboratory waste and bandages.

Traditionally, the waste is packed into plastic drums and incinerated at a waste processing plant, which is harmful to the environment. However, with the implemented of Sterilwave® this process has been made more sustainable.



The name Sterilwave® perfectly captures its function: “steril” signifies sterilisation or disinfection, while “wave” represents the microwave technology employed. By grinding up the waste, the volume is reduced by approximately 40 percent. “This reduction means a significant decrease in the number of barrels incinerated annually” says Edwin van Stralen, the team leader of internal logistics and waste management at UMC Utrecht.



### Reducing Hospital Waste

Waste policy is an integral part of UMC Utrecht's sustainability policy, aligning with their goal of become CO2 neutral by 2030 and fully circular by 2050. Edwin explained that “by reducing our hospital waste and making it circular, we can contribute to this. That's why we started looking for providers to recycle this waste. A trial with the Sterilwave has been running for a year now, we are very enthusiastic, because we are now only left with a harmless load of small waste particles, which are no longer infectious or dangerous. Moreover, much less in volume, so cheaper in transport and less CO2 emissions.” After a successful trial in cooperation with the laboratory, the necessary environmental permit for deployment of the Sterilwave is now also in place.



## Treatment of hospital waste at the UMC of Utrecht

### Case Study

#### Creating a circular economy

The hospital is taking a circular step by repurposing the residual waste. Instead of incineration, the waste will be utilised as a substitute for sawdust in the cement industry. Edwin highlights that the waste treatment plant traditionally purchases sawdust as an absorbent for their processes, but they will now partly rely on UMC Utrecht's medical waste product. This innovative approach reduces the need for timber, as the hospital's waste becomes a valuable resource.

#### Next steps with Sterilwave®

With Sterilwave® successfully implemented at UMC Utrecht, they are considering expanding its use to other departments and additional waste. Currently, the machine can process approximately 30 percent of the total waste into a circular residual product, but they are aiming to reach 60 to 70 tons per year. This expansion requires further preparation. This expansion requires further preparation including the potential purchase of a larger machine to make more waste circular. Edwin takes pride in the fact that they have made waste recyclable, considering it just the beginning. This achievement is scalable within UMC Utrecht and beyond. However, there is still work to be done to make our other waste streams more sustainable. For instance, fluids from chemotherapy and human waste material will not be processed in the Sterilwave®. Nevertheless, our progress is truly commendable.



#### ABOUT HIPAC

At Hipac, we want the same thing as our clients – an environment where healthcare professionals can work productively, safely and efficiently to achieve the best possible patient outcomes. We work closely with our customers and partners to design, manufacture and supply superior products. With almost 40 years of experience, Hipac has the expertise to deliver premium solutions along with competent, trustworthy advice.

PO Box 797, 36 Long St. Goulburn NSW 2580, Australia  
P. +61 2 4823 0000 E. [info@hipac.com.au](mailto:info@hipac.com.au)

SYDNEY | MELBOURNE | BRISBANE | ADELAIDE | PERTH

[hipac.com.au](http://hipac.com.au)

ABN 27 600 353 688