Daniels Health

Sustainable Solutions

Safer. Simpler. Smarter.
Greener.

Daniels

MAKING HEALTHCARE SAFER
SOINS DE SANTÉ PLUS SÉCURITAIRES

Putting the environment first.

Daniels Health is a company committed to ecological sustainability and safe environmental practices. All Daniels products and waste processing solutions are designed and engineered for minimum environmental impact. By harnessing innovation and efficiency-driving technologies, we continue to refine our treatment and handling methods to reduce the amount of waste going to landfill every year.

SHARPSMART: REDUCING LANDFILL AND CARBON EMISSIONS

Since its inception, Daniels Health has focused on the fundamental importance of environmental safety. Designed as a sustainable alternative to disposable containers, the reusable Sharpsmart reduces significant volumes of plastic and cardboard from the sharps waste stream.

A study conducted in an 850 bed acute care facility in 2012 examined greenhouse gas emission (GHG) comparisons between disposable sharps containers and Daniels Sharpsmart reusable collectors. The results were unprecedented, revealing an 84% reduction in carbon emissions; equating to 93 metric tons per annum.

Further results from the published journal study showed:

100%

Reduction in the number of sharps containers landfilled per annum

97.6%

Reduction in the weight of cardboard landfilled per annum

57%

Reduction in disposal-related sharps injuries

99.6%

Reduction in the amount of plastic landfilled per annum

92.8%

Reduction in the manufacture of sharps containers per annum

"The 84% reduction of CO_2eq emissions with the Daniels Sharpsmart system exceeds the 2020 reduction target for US federal hospitals and the 2050 target for UK NHS hospitals. If Daniels Sharpsmart reusable collectors were used nationally in the US, we estimate annual US hospital GWP would fall by 64,000 $MTCO_2$eq."*

TERRY GRIMMOND & SANDRA REINER
WASTE MANAGEMENT & RESEARCH 2012; 30-639-642

*Sustainability and Safety - A rare combination in sharps containment

Why are reusable sharps container better for the environment?

As healthcare facilities across Canada increasingly focus on reducing the environmental impact of their waste streams, it is vital to understand the difference between disposing of sharps waste in 'reusable' collectors vs. 'disposable' or 'recyclable' containers.

ENVIRONMENTAL HARM OF **REUSABLE COLLECTORS**

The most environmentally-friendly collectors for disposing of sharps waste from healthcare facilities are those that are able to be reused many times during their lifetime.

Why?

When a reusable collector is filled, only the waste inside it is destroyed, lessening the environmental impact of discarded plastic and cardboard being sent to landfill. The used collector is hygienically washed and returned ready for the next use.

Each year, for every 100 occupied beds in Canadian healthcare, the Daniels Sharpsmart reusable sharps collector:

- Reduces plastic waste by **3.5 Tonnes**
- Reduces cardboard waste by **0.4 Tonnes**
- Eliminates the manufacturing and landfilling of **4,707** disposable containers

DATA EXTRACTED FROM PEER REVIEWED, PUBLISHED STUDIES.
Terry Grimmond Microbiologist | FASM, BAgrSc, GrDpAdEd

ENVIRONMENTAL HARM OF **RECYCLED CONTAINERS**

While the concept of recycling has received a lot of positive attention in recent years, the process is not as simple as it appears and can result in a negative environmental impact.

Why?

Generally, recycled plastic comes from 'safe' sources such as soft drink bottles. In order to avoid issues of potential contamination and to maintain product strength and integrity, only about 10% of recycled material is used when producing new plastic items.

If used sharps containers were to be utilised as a source of recyclable plastic, a safe method of opening and handling the contents would be required. In addition, containers would need to be cleaned to a standard that recyclers would accept. Such a process would involve a significant amount of energy and materials and would still require a large amount of new plastic to make new containers.

ENVIRONMENTAL HARM OF **DISPOSABLE CONTAINERS**

Disposable sharps containers are destroyed along with their contents. As a consequence, they are the least environmentally-friendly method of handling sharps waste.

Why?

A disposable container has twice the negative impact on the environment:

The disposal process uses valuable energy resources when containers are treated (commonly via incineration or autoclaving), in addition to their waste contents. Furthermore, the containers also add to the volume of residual material that ends up in landfills.

For every disposable container that is used, another new container must be manufactured as a replacement. This process requires a completely new allocation of materials and additional energy resources.

Each year in Canada, the Daniels Sharpsmart reusable collector:

- **Reduces plastic waste by 435 Tonnes,**
- **Reduces cardboard waste by 69 Tonnes,**
- **Eliminates the manufacturing of 973,000 disposable containers.**

DATA EXTRACTED FROM PEER REVIEWED, PUBLISHED STUDIES | Terry Grimmond Microbiologist | FASM, BAgrSc, GrDpAdEd

Minimising Landfill

MEDISMART:
WASTE SEGREGATION OPTIMISATION

The Daniels Medismart is the first medical waste containment system in the world which actively protects against infection risk and proactively assists in positive waste segregation. The bagless reusable M64 collector offers a unique paradigm shift in environmental consciousness; altering human behaviour defaults towards the disposal of waste through the collectors' engineered functionality, differentiating aesthetics, and point-of-use accessibility.

A Peer Reviewed study conducted at a large private hospital demonstrated the Medismart achieving unprecedented environmental-burden reducing outcomes:

BIOMEDICAL WASTE MASS REDUCTION OF

53.2%

BIOMEDICAL WASTE VOLUME REDUCTION OF

65.2%

The combination of being positioned exactly at point of waste generation, together with its easily identifiable colour coding, labeling and aesthetics, gives the Medismart system an unparalleled advantage in waste segregation, staff safety and environmental impact reduction.

MEDISMART **M64**

OUR ECOLOGICALLY SUSTAINABLE TECHNOLOGY

WASHSMART

Groundbreaking in its engineering, the Daniels Washsmart has been designed to achieve the highest levels of safety, environmental sustainability and decontamination attainable in a robotic washing process. Proven results in peer reviewed studies show its environmental burden to be dramatically less than any other waste container washing process.

"The Washsmart cleaning process was independently tested by coating Medismart bins with 6-log blood suspensions of Staph aureus and E. faecalis. On swabbing them after the wash, no challenge organisms were detected – this is a very high level of decontamination."

TERRY GRIMMOND
Microbiologist | FASM, BAgrSc, GrDpAdEd

"From switching over to the Daniels Sharpsmart system : in a 12 month period, we reduced our Regulated Biomedical Waste by 58%. That in turn, saved our organisation nearly **$13,000"**

STEVE EGBERT
CHESP | General Manager
Sodexo, Crittenton Hospital Medical Center

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