

# THE ARTA-ENVIRONMENTAL CLARITY LIFE CYCLE ASSESSMENT OF INCONTINENCE PADS

REUSABLE & DISPOSABLE



## LIFE CYCLE METRICS

The life cycle assessment (LCA) of reusable incontinence pads was compared to that of disposable incontinence pads on a cradle to end of life basis.

The functional unit was 1000 reusable pad uses. Environmental performance metrics used for comparison were:

- (1) Total fossil energy resources
- (2) Fossil resources combusted for energy
- (3) Global warming potential (carbon equivalents)
- (4) Blue water use (water loss) and
- (5) Solid waste generation.



## RESULTS

When compared to disposable pad use, reusable pads were found to result in:

- 71% Fossil resources savings
- 52% Less fossil resources combusted for energy
- 56% Less water loss (blue water savings)
- 61% Less carbon equivalent emissions
- 97% Less solid waste at laundry or healthcare facility



## REUSABLE VS. DISPOSABLE LCA ASSUMPTIONS

	Architecture and materials	Size	Weight	Average number of uses	Average pads per adjusted patient day (ADP)	Number of units, frequency of use	Timeframe and disposal
<b>Reusable Pads</b>	Rayon/polyester absorbent layer, polyester top and bottom layers, and polyurethane or poly-vinyl chloride barrier layer	34" x 36"	433 g/pad	46	0.69 ADP	1/ADP 1,000	Cradle to end of life (83% landfill, 17% incineration)
<b>Disposable Pads</b>	Superabsorbent polymer/cellulose soaker with a polyethylene barrier and non-woven polypropylene top and bottom layers	30" x 36"	144 g/pad	1	1.46 ADP	2.1/ADP 2,120	Cradle to end of life (83% landfill, 17% incineration)

Study funded by the ARTA Incontinence Pad LCA Committee

The American Reusable Textile Association (ARTA) mission is to promote greater appreciation for reusable textiles.  
www.ARTA1.com