

DECONGEL

DeconGel 1101

Peelable Decontamination Technology (Nuclear Medicine and Research Laboratories)

DeconGel 1101 is a one component, water-based, broad application, peelable decontamination hydrogel that **lifts, binds and encapsulates** contaminants into a rehydratable polymer matrix.

DeconGel 1101 is a safe, user and material friendly, neutral-pH, low odor polymer hydrogel for radiological decontamination of radioisotopes as well as particulates, heavy metals, water-soluble and insoluble organic compounds (including tritiated compounds). The product can be applied to horizontal, vertical and inverted surfaces and applied to most surfaces (see the *DeconGel 1101 Product Data Sheet*).

Decontamination Demonstration with DeconGel



Chalk on a textured ceramic tile shows the lift, bind and encapsulation process of DeconGel. A white glove test on the film underside came out clean – demonstrating that particulate matter is fully entrapped in the dry film.

Advantages of DeconGel 1101 as a peelable, broad application decontamination agent include:

- Zero preparation
- Easy application (Apply → Dry → Peel → Dispose)
- Simple decontamination (Lifts → Binds → Encapsulates)
- Penetrates and removes contamination from cracks, pores, and voids
- Works on variety of surfaces (smooth, rough and painted) and complex geometries
- Minimal odor, respirators not required during application or peeling unless mandated
- Dries into tough film that is easy to peel (non-sticky) and dispose
- Minimizes contaminated waste material for easy and safe disposal
- Ability to rehydrate for forensics (wet analysis, filtration of contaminants)
- DeconGel has demonstrated effective on typical nuclear medicine and biomed radioisotopes:
 - C-14, F-18, Tc-99^m, I-125, I-131
 - [³H]-TdR, [³H] NaBH₄



WINNER 'BEST D&D POSTER' - 2007 Waste Management Symposium
"An Improved Polymer-based Hydrogel for Decontamination of Hard Assets"

Initial Nuclear Medicine Facility Field Test with DeconGel, Columbia, SC

Material/Surface Contaminated with I-131	Activity Before (dpm/100cm ²)	Activity After ¹ (dpm/100cm ²)	Decon %
General area ²	2,000	600	70%
Tiled Floor	1,600	<200 ⁴	88%
Toilet	140,000	1,500	99%
Sink	1,000	<50	95%

Notes:

Treatment room initially cleaned with commercial decon solution, but still contaminated after several attempts. Results above are one application of DeconGel (formula 188) to the same areas.

¹ Results are for one application of DeconGel; all areas subsequently deconned for free release (⁴< 200 dpm at this facility)

² End-user "quite pleased" with the measured level of performance as could not be deconned with common liquid decon solution

I-131 Field Test at Tripler Army Medical Center ¹, Honolulu, Hawaii

Surface Contaminated with I-131	Swipe Before ² (cpm/100cm ²)	Swipe After ¹ (cpm/100cm ²)	Decon %
Sink	8,415	600	99%
Counter	2,679	0	100%
Bedside Floor	53	0	100%
Bathroom Floor	124	5	96%

Notes:

¹ Thanks to LTC M. Bower and staff (March 2007); ² Measured with Quantum 5003 Gamma Counter; cpm recorded > background

Tc-99m Treadmill Test at Tripler Army Medical Center, Honolulu, Hawaii

Formula	Swipe Before ^{1, 2} (cpm/100cm ²)	Swipe After ² (cpm/100cm ²)	Decon %
DeconGel 1001 EXP	348,034	494	99.9%
DeconGel 1101	693,575	657	99.9%

Notes on Comparative Test of two formulas to ensure maintenance of efficacy:

¹ Decay adjusted for overnight dry; ² Measured with Quantum 5003 Gamma Counter; cpm recorded > background

Field testing at hospitals, universities, corporate and National laboratories continues to prove that DeconGel 1101 can decontaminate loose and fixed contamination from a variety of surfaces and substrates. For more information on DeconGel 1101, please contact:



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