Assessment of dermal absorption of aluminium from a representative antiperspirant formulation using a [^{26}Al]Al microtracer approach – a follow-up study in humans

Rianne de Ligt[1], Joost Westerhout[2], Dimitri Grossouw[1], Thomas P. Buters[3], Robert Rissmann[3], Jacobus Burggraaf[3], Albert D. Windhorst[4], Sarah Tozer[5], Gerlinde Pappa[6], Brian Wall[7], Dagmar Bury[8], David R. Mason[9], and Wouter H.J. Vaes[1]

Table S1 – Overview of nominal doses applied (parts A and B)

Part – Treatment	**Amount**	**Concentration**	**Nominal dose**	**Nominal dose of [^{26}Al]**
A – Topical (~2500 Bq)	1.5 g	1797 Bq/g	2695 Bq	3730317 pg
A – IV (cohort 1)	5 mL	0.017 Bq/mL	0.086 Bq	120 pg
A – IV (cohort 2)	5 mL	0.014 Bq/mL	0.072 Bq	100 pg
B – Topical (~1 Bq)	1.5 g	0.76 Bq/g	1.14 Bq	1573 pg

Subjects 01-06 were included in Part A, where cohort 1 was comprised of subjects 01, 03, 04 and 05 and cohort 2 comprised of subjects 02 and 06, subjects 07-12 were included in Part B

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Table S2 – Summary of emergent adverse events by relationship, intensity and system organ class

Relationship	Intensity	System Organ Class (number)
Probably	Moderate	Infusion site pain (2)
	Mild	Dermatitis contact (3); Skin abrasion (2); Application site erythema (1); Dizziness (1); Nausea (1); Pruritus (1)
Possibly	Mild	Paraesthesia (1)
Unrelated	Moderate	Influenza like illness (1); Musculoskeletal pain (1)
	Mild	Headache (14); General disorders (4)

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Table S3 – Part B. Averaged amount of [^{26}Al] recovered from the tape strips and skin biopsies, normalized for the amount recovered after 20 minutes of application.

Tape strip number(s)	**Recovery in % of dose (normalized on t=20 min)**			
	t=20 min	t=1h	t=6h	t=24h
1	70%	44%	7.0%	0.6%
2	13%	11%	1.0%	0.2%
3	4.5%	3.8%	0.9%	0.2%
4	3.4%	2.0%	0.3%	0.1%
5	2.0%	1.4%	0.3%	0.1%
6	2.3%	0.8%	0.2%	0.04%
7	1.0%	1.4%	0.8%	0.1%
8	0.9%	1.0%	0.7%	0.1%
9	0.9%	0.9%	0.4%	0.1%
10	0.9%	0.9%	0.4%	0.1%
11-20	0.6%	0.5%	0.1%	0.03%
21-30	0.5%	0.3%	0.1%	0.02%
31-40	0.3%	0.1%	0.1%	0.02%
Total	100%	68%	12%	1.6%
Skin biopsy (n=4, 2 samples <LLOQ)	n.a.	n.a.	n.a.	0.08%

n.a. not applicable