Assessment of chromium(VI) release from 848 jewellery items by use of a diphenylcarbazide spot test - DTU Orbit (09/11/2017)

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We recently evaluated and validated a diphenylcarbazide (DPC)-based screening spot test that can detect the release of chromium(VI) ions (≥0.5 ppm) from various metallic items and leather goods (1). We then screened a selection of metal screws, leather shoes, and gloves, as well as 50 earrings, and identified chromium(VI) release from one earring. In the present study, we used the DPC spot test to assess chromium(VI) release in a much larger sample of jewellery items (n=848), 160 (19%) of which had previously been shown to contain chromium when analysed with X-ray fluorescence spectroscopy (2).

General information
State: Published
Organisations: Department of Mechanical Engineering, Materials and Surface Engineering, Jagiellonian University Medical College, Copenhagen University Hospital, Ohio State University, Loma Linda University, Contact Dermatitis Institute
Pages: 115-117
Publication date: 2016
Main Research Area: Technical/natural sciences

Publication information
Journal: Contact Dermatitis
Volume: 75
Issue number: 2
ISSN (Print): 0105-1873
Ratings:
BFI (2017): BFI-level 2
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 2.47 SJR 0.829 SNIP 1.59
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): SJR 1 SNIP 1.468 CiteScore 2.85
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 2
Scopus rating (2014): SJR 0.874 SNIP 1.677 CiteScore 2.02
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 2
Scopus rating (2013): SJR 0.796 SNIP 1.409 CiteScore 1.87
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 2
Scopus rating (2012): SJR 0.87 SNIP 1.361 CiteScore 1.98
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 2
Scopus rating (2011): SJR 1.03 SNIP 1.145 CiteScore 1.91
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 2
Scopus rating (2010): SJR 0.811 SNIP 1.173
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 2
Scopus rating (2009): SJR 0.782 SNIP 1.185
BFI (2008): BFI-level 2
Scopus rating (2008): SJR 0.646 SNIP 1.279
Web of Science (2008): Indexed yes