Assessment of chromium(VI) release from 848 jewellery items by use of a diphenylcarbazide spot test - DTU Orbit (04/05/2019)

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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 be shown to contain chromium when analysed with X-ray fluorescence spectroscopy (2).

General information
Publication status: Published
Organisations: Department of Mechanical Engineering, Materials and Surface Engineering, Jagiellonian University Medical College, Copenhagen University Hospital, The Ohio State University, Loma Linda University Health, Contact Dermatitis Institute
Pages: 115-117
Publication date: 2016
Peer-reviewed: Yes

Publication information
Journal: Contact Dermatitis
Volume: 75
Issue number: 2
ISSN (Print): 0105-1873
Ratings:
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 2.47 SJR 0.862 SNIP 1.665
Web of Science (2016): Impact factor 4.335
Web of Science (2016): Indexed yes
Original language: English
Keywords: Allergic chromium dermatitis, Chromium, Chromium allergy, Dermatitis, Metals, Potassium dichromate, Screening, Spot test
DOIs:
10.1111/cod.12577
Source: Findit
Source-ID: 2306412197
Research output: Contribution to journal › Journal article – Annual report year: 2016 › Research › peer-review