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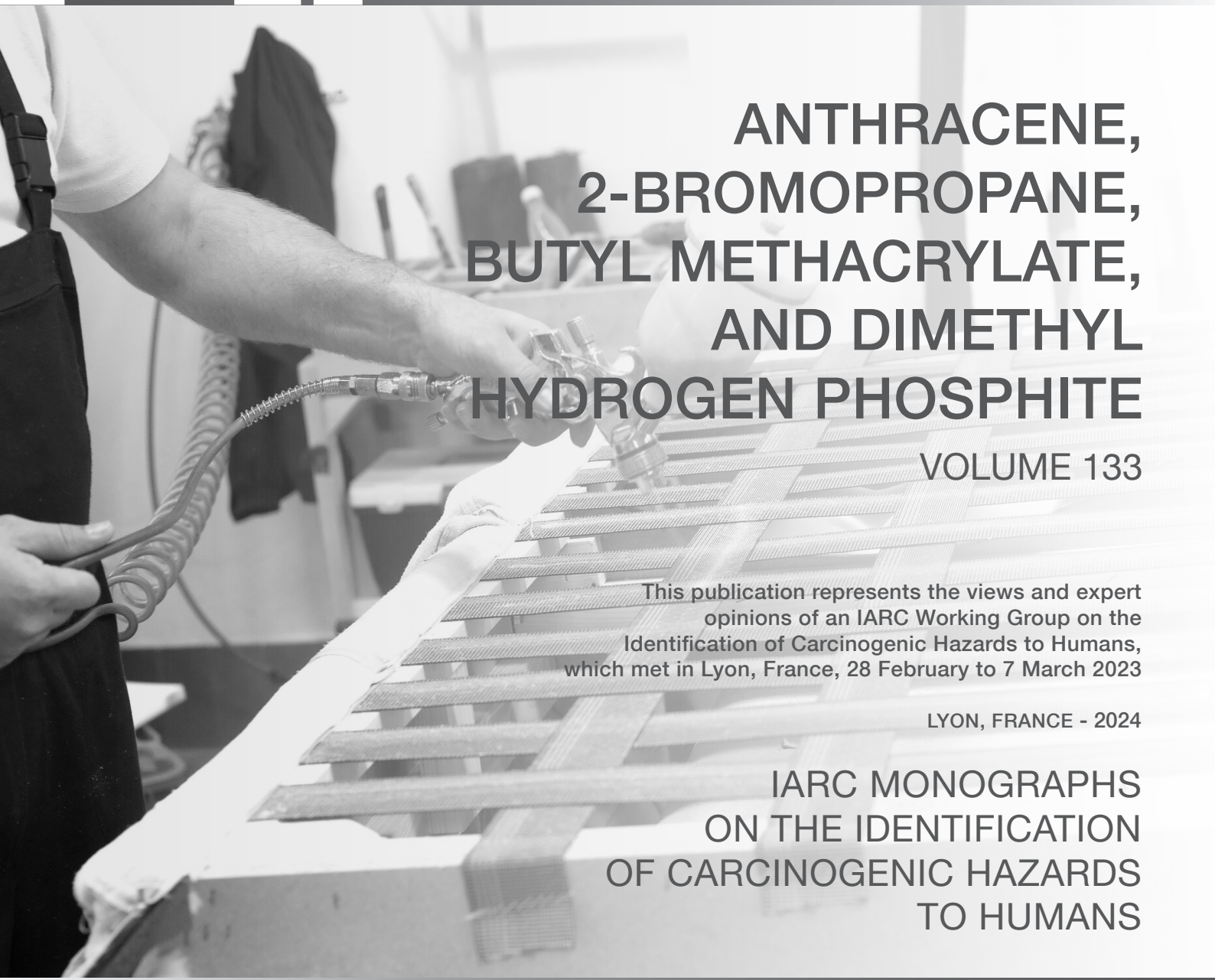

ANTHRACENE, 2-BROMOPROPANE, BUTYL METHACRYLATE, AND DIMETHYL HYDROGEN PHOSPHITE

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Table S1.3 Exposure assessment review and critique for mechanistic studies in humans exposed to butyl methacrylate

Reference and mechanistic end-point	What was the study design? (*n*)	What methods were used for the exposure assessment? (e.g. data source, environmental and biological measurements)	Was the exposure defined well, and what was the definition?	Was exposure assessment qualitative, semiquantitative, or quantitative?	Were sampling and collection protocols for chemical measurements appropriate?	What routes of exposure were assessed?	How was the intensity of exposure assessed?	How was the duration of exposure assessed?	Was cumulative exposure assessed?	Was exposure assessed before outcome was ascertained?	What was the timing of the exposure relative to the outcome?	Was there known exposure to any other carcinogens?	Could the "unexposed" group have included exposed people?
Raymond (1996) Pulmonary abnormalities and serum immunoglobulin changes	Group A: case series of facsimile machine repair technicians (*n* = 7) in New York, New York, USA Group B: cross-sectional study among technicians (*n* = 6) and controls (*n* = 12) in Dallas, Texas, USA Group C: 32 technicians in Philadelphia, Pennsylvania, USA	Observation, PBZ measurements for fumes, job title/duties	Group A: yes; exposure was defined by job title and performing work with significant BMA exposure in emissions. One personal measurement. Group B: yes; exposure was defined by job title and performing work with significant BMA exposure in emissions. Group C: no, because exposures to acrylate-containing paper decreased over time and there were not good descriptions of how exposure was phased out.	Group A: qualitative and quantitative for 1 case Group B: quantitative Group C: qualitative	Group A: no; total particulate monitoring (see group B) Group B: no; air samples captured particulates on 37 mm closed-face cassette and analysed gravimetrically; published methods suggest air sampling for vapour phase via charcoal tube followed by analysis via GC or HPLC. Group C: N/A	Inhalation	Group A: asking technicians about the relationship between testing and symptoms; noted no local exhaust in the machine room. Group B: non-specific gravimetric analysis of PBZ for total particulate. Group C: intensity not assessed, acrylate-containing paper reported to be phased out, with unknown ongoing exposure.	Group A: duration of doing testing (12–18 mo) Group B: samples taken during facsimile machine adjustment and testing (2.4–7 h); number of shifts or employment duration NR. Group C: mo from discontinuation of acrylate-containing paper; exposure assumed to decrease over time.	No	NR	Group A: exposure occurred before outcome measure. Group B: NR, but there was no pre-exposure physical/outcomes assessment. Group C: exposure occurred before outcome measure.	Current and past smoking history was recorded. Other components of machine fumes were not identified.	Group A: N/A Group B: unlikely for cross-sectional study. Group C: unclear for follow-up; all classified as unexposed, but BMA-containing paper continued to be used.

BMA, butyl methacrylate; GC, gas chromatography; h, hour(s); HPLC, high-performance liquid chromatography; mo, month(s); N/A, not applicable; NR, not reported; PBZ, personal breathing zone.

Reference

Raymond LW (1996). Pulmonary abnormalities and serum immunoglobulins in facsimile machine repair technicians exposed to butyl methacrylate fume. Chest. 109(4):1010–8. https://doi.org/10.1378/chest.109.4.1010 PMID:8635324