The Contamination of Intravenous Fluid by Felt - Tip Marking Pen Ink: a Pilot Study

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Abstract: The contamination of intravenous fluid by felt - tip marking pen ink: a pilot study

Background: The practice of writing directly on infusion bags with felt - tip marking pen was suggested to cause contaminations. Recommendation against such practice has been published by manufacturers and health care authorities. A chromatography-based laboratory experiment was conducted to substantiate the possibility of ink constituents permeation through PVC infusion bag. Methods: A Viaflex® intravenous infusion bag was marked with a blue Artline® marking pen ink. Fluid samples were obtained at different time intervals and extracted of any contaminations. A gas chromatography with mass spectrometry capability system was used to analyse fluid samples from infusion bag. Results: Five fluid samples were obtained from 0, 10, 30, 60, 120 minutes of ink exposure time. Chromatograms from each sample were compared against a chromatogram from “blank” intravenous solution. There appeared to be no chromatographic evidence of ink constituents present in all intravenous fluid samples. Conclusion: The practice of writing directly on Viaflex® infusion bags with certain felt - tip marking pen should not be discouraged by fear of contamination.
References
