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A Chemical Stain for Identifying Arsenic-Treated Wood Products

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Abstract: Convenient and rapid detection of arsenic in treated wood products is necessary when evaluating possible exposure risks from the product during in-service use and disposal. For this study, a modified stannous chloride stain capable of specifically identifying arsenic in preservative-treated wood was developed by causing the over-reduction of molybdenum with stannous chloride prior to sample addition. This reduced the stain's sensitivity to the background phosphate levels in the wood and permitted the detection of elevated arsenate concentrations. The modified stain was confirmed through field testing with weathered wood samples. Alternative application techniques, such as wipes, were further explored.

Keywords: Arsenic, treated wood, CCA, molybdenum, stannous chloride, stain

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