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# Colorimetric Field Drug Tests are Unreliable and Lead to Wrongful Arrests and Convictions

*More than half of the 1.5 million drug arrests each year involve the use of colorimetric field tests that use color-changing chemical reactions to detect illicit substances. These tests provide a fast, inexpensive tool for determining whether an illicit substance is present at the scene of an investigation or stop and often serve as probable cause for arrest. Presumptive field tests are not designed to be conclusive or identify the presence of a particular drug. In effect, these tests flip Americans' constitutional right to the presumption of innocence on its head.*

## Colorimetric Tests are Near-Ubiquitous in Drug Enforcement, Despite Known Flaws.

- A recent report by the Quattrone Center at the University of Pennsylvania Law School found that approximately 773,000 of the more than 1.5 million drug arrests conducted in the United States each year involve the use of color-based presumptive tests.<sup>1</sup>
- Colorimetric drug tests are notoriously unreliable because they often give false positive results for legal substances. The reliability of tests can be affected by environmental factors, by improper storage and handling, and by improper administration of the tests.
- Research has identified error rates as high as 38% in some contexts.<sup>2</sup>
- Even the manufacturers of presumptive field test kits warn that confirmatory lab testing is necessary.

## Colorimetric Tests are a Leading Cause of Wrongful Arrests and Convictions in the United States.

- Thousands of Americans are arrested and convicted (overwhelmingly through coercive plea bargaining) for drug possession in cases where presumptive tests were not confirmed by subsequent laboratory testing.
- In a national survey, 89% of prosecutors reported that they accept guilty pleas without laboratory testing to confirm the results of a positive colorimetric field test result.
- An estimated 30,000 people are falsely implicated by colorimetric field drug tests each year. That would make these tests the largest known cause of wrongful arrests and convictions in the United States.

**Bottom line:** *States should examine how useful these tests really are, and how to ensure that false positives don't lead to the arrest or conviction of innocent individuals.*

<sup>1</sup> Ross Miller, Haley Sturges, and Paul Heaton (2023) "Guilty until Proven Innocent: Field Drug Tests and Wrongful Convictions," Quattrone Center for the Fair Administration of Justice, University of Pennsylvania Carey Law School.

<sup>2</sup> Green et al. v. Massachusetts Department of Corrections et al. (2021)

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