

Quest Diagnostics Drug Testing Index™

Full year 2023 tables

**Table 1. Annual Positivity Rates – Urine Drug Tests
(For Combined U.S. Workforce)**



(More than 8.4 million tests from January to December 2023)

Year	Drug Positivity Rate
1988	13.6%
1989	12.7%
1990	11.0%
1991	8.8%
1992	8.8%
1993	8.4%
1994	7.5%
1995	6.7%
1996	5.8%
1997	5.0%
1998	4.8%
1999	4.6%
2000	4.7%
2001	4.6%
2002	4.4%
2003	4.5%
2004	4.4%
2005	4.0%
2006	3.8%
2007	3.8%
2008	3.6%
2009	3.6%
2010	3.5%
2011	3.5%
2012	3.5%
2013	3.7%
2014	3.9%
2015	4.0%
2016	4.2%
2017	4.2%
2018	4.4%
2019	4.5%
2020	4.4%
2021	4.6%
2022	4.6%
2023	4.6%

Table 2. Positivity Rates by Testing Category – Urine Drug Tests

Testing Category	2019	2020	2021	2022	2023
Federally Mandated, Safety-Sensitive Workforce	2.4%	2.2%	2.2%	2.4%	2.4%
General U.S. Workforce	5.3%	5.5%	5.6%	5.7%	5.7%
Combined U.S. Workforce	4.5%	4.4%	4.6%	4.6%	4.6%

Table 3. Positivity Rates by Testing Reason – Urine Drug Tests (For Federally Mandated, Safety-Sensitive Workforce)*(More than 2.8 million tests from January to December 2023)*

Testing Reason	2019	2020	2021	2022	2023
Follow-Up	5.1%	4.6%	4.3%	4.2%	3.8%
For Cause	13.0%	12.7%	13.8%	12.9%	14.5%
Post-Accident	4.5%	4.3%	4.4%	4.5%	4.6%
Pre-Employment	2.4%	2.1%	2.3%	2.5%	2.5%
Random	2.2%	2.0%	1.9%	1.9%	2.0%
Return to Duty	5.0%	4.5%	4.7%	4.9%	5.2%

Table 4. Positivity Rates by Testing Reason – Urine Drug Tests (For General U.S. Workforce)*(More than 5.5 million tests from January to December 2023)*

Testing Reason	2019	2020	2021	2022	2023
Follow-Up	8.3%	7.1%	7.1%	7.3%	8.8%
For Cause	35.7%	34.7%	34.9%	38.6%	39.4%
Post-Accident	9.1%	9.5%	9.7%	10.3%	10.4%
Pre-Employment	4.9%	5.2%	5.4%	5.5%	5.4%
Random	5.6%	5.8%	5.8%	5.9%	6.0%
Return to Duty	6.8%	6.2%	6.3%	7.0%	8.4%

**Table 5. Positivity Rates by Drug Category – Urine Drug Tests
(For Federally Mandated, Safety-Sensitive Workforce, as a percentage of all such tests)**

(More than 2.8 million tests from January to December 2023)

Drug Category	2019	2020	2021	2022	2023
6-AM	0.011%	0.008%	0.005%	0.003%	0.003%
Amphetamines (Amphetamine/Methamphetamine)	0.68%	0.64%	0.69%	0.75%	0.76%
Cocaine	0.25%	0.20%	0.21%	0.21%	0.21%
Marijuana	0.88%	0.79%	0.86%	0.98%	0.95%
MDMA (MDMA/MDA)	0.003%	0.002%	0.002%	0.003%	0.003%
Opiates (Codeine/Morphine)	0.12%	0.10%	0.08%	0.08%	0.07%
Opiates (Hydrocodone/Hydromorphone)	0.35%	0.30%	0.27%	0.24%	0.22%
Oxycodones (Oxycodone/Oxymorphone)	0.26%	0.21%	0.20%	0.18%	0.18%
PCP	0.011%	0.011%	0.010%	0.009%	0.008%

**Table 6. Positivity Rates by Drug Category – Urine Drug Tests
(For General U.S. Workforce, as a percentage of all such tests)**

(More than 5.5 million tests from January to December 2023)

Drug Category	2019	2020	2021	2022	2023
6-AM	0.02%	0.018%	0.013%	0.006%	0.005%
Amphetamines (Amphetamine/Methamphetamine)	1.3%	1.3%	1.3%	1.5%	1.5%
Barbiturates	0.20%	0.20%	0.18%	0.17%	0.15%
Benzodiazepines	0.43%	0.39%	0.36%	0.35%	0.34%
Cocaine	0.27%	0.22%	0.21%	0.22%	0.24%
Marijuana	3.1%	3.6%	3.9%	4.3%	4.5%
MDMA (MDMA/MDA)	0.008%	0.010%	0.005%	0.004%	0.005%
Methadone	0.16%	0.14%	0.13%	0.12%	0.12%
Opiates	0.25%	0.21%	0.17%	0.16%	0.14%
Opiates (Hydrocodone/Hydromorphone)	0.37%	0.33%	0.32%	0.32%	0.29%
Oxycodones (Oxycodone/Oxymorphone)	0.34%	0.29%	0.29%	0.28%	0.27%
PCP	0.011%	0.009%	0.008%	0.008%	0.007%
Propoxyphene	0.000%	0.001%	0.000%	0.000%	0.000%

**Table 6a. Positivity Rates by Drug Category – Urine Drug Tests
(For General U.S. Workforce Pre-employment only, as a percentage of all such tests)**

(Nearly 60,000 tests from January to December 2023)

Drug Category	2020	2021	2022	2023
Fentanyl	0.17%	0.14%	0.13%	0.16%

**Table 7. Positivity Rates by Drug Category – Urine Drug Tests
(For Combined U.S. Workforce, as a percentage of all such tests)**

(More than 8.4 million tests from January to December 2023)

Drug Category	2019	2020	2021	2022	2023
6-AM	0.015%	0.011%	0.008%	0.004%	0.004%
Amphetamines (Amphetamine/Methamphetamine)	1.1%	1.1%	1.1%	1.2%	1.3%
Barbiturates	0.20%	0.20%	0.18%	0.17%	0.15%
Benzodiazepines	0.43%	0.39%	0.36%	0.35%	0.34%
Cocaine	0.26%	0.21%	0.21%	0.22%	0.23%
Marijuana	2.5%	2.7%	2.9%	3.1%	3.1%
MDMA (MDMA/MDA)	0.005%	0.006%	0.004%	0.003%	0.004%
Methadone	0.16%	0.14%	0.13%	0.12%	0.12%
Opiates	0.22%	0.17%	0.15%	0.14%	0.12%
Opiates (Hydrocodone/Hydromorphone)	0.35%	0.31%	0.28%	0.26%	0.24%
Oxycodones (Oxycodone/Oxymorphone)	0.30%	0.24%	0.24%	0.23%	0.21%
PCP	0.011%	0.010%	0.008%	0.008%	0.007%
Propoxyphene	0.000%	0.001%	0.000%	0.000%	0.000%

**Table 8. Non-Negative Rates by Specimen Validity Test (SVT)² Category – Urine Drug Tests
(For Federally Mandated, Safety-Sensitive Workforce, as a percentage of all such tests)**

(More than 2.8 million tests from January to December 2023)

SVT Category	2019	2020	2021	2022	2023
Acid-Base	0.010%	0.009%	0.009%	0.008%	0.008%
Invalid	0.21%	0.20%	0.26%	0.30%	0.41%
Oxidizing Adulterants	0.000%	0.000%	0.000%	0.000%	0.000%
Substitution	0.017%	0.016%	0.014%	0.017%	0.08%

²Specimen validity testing is the evaluation of a specimen to determine if it is consistent with a normal human specimen. Tests for specimen validity include tests to determine whether a specimen is adulterated or substituted.

**Table 9. Non-Negative Rates by Specimen Validity Test (SVT) Category – Urine Drug Tests
(For General U.S. Workforce, as a percentage of all such tests)**

(More than 5.5 million tests from January to December 2023)

SVT Category	2019	2020	2021	2022	2023
Acid-Base	0.009%	0.009%	0.009%	0.009%	0.008%
Invalid	0.18%	0.17%	0.26%	0.31%	0.45%
Oxidizing Adulterants	0.000%	0.000%	0.000%	0.000%	0.000%
Substitution	0.015%	0.012%	0.013%	0.015%	0.11%

**Table 10. Non-Negative Rates by Drug/SVT Category – Urine Drug Tests
(For Federally Mandated, Safety-Sensitive Workforce, as a percentage of all non-negatives)**

(More than 80 thousand non-negative test results from January to December 2023)

Drug/SVT Category	2019	2020	2021	2022	2023
6-AM	0.40%	0.31%	0.18%	0.11%	0.11%
Acid-Base	0.34%	0.35%	0.33%	0.29%	0.29%
Amphetamines (Amphetamine/Methamphetamine)	24.3%	25.9%	26.6%	26.8%	26.2%
Cocaine	9.1%	8.1%	8.0%	7.6%	7.2%
Invalid	7.5%	7.9%	10.0%	10.9%	14.1%
Marijuana	31.5%	31.9%	33.1%	35.2%	32.9%
MDMA (MDMA/MDA)	0.09%	0.09%	0.08%	0.09%	0.10%
Opiates (Codeine/Morphine)	4.2%	3.9%	3.1%	3.0%	2.4%
Opiates (Hydrocodone/Hydromorphone)	12.3%	12.0%	10.2%	8.6%	7.6%
Oxidizing Adulterants	0.000%	0.000%	0.000%	0.000%	0.000%
Oxycodones (Oxycodone/Oxymorphone)	9.3%	8.5%	7.5%	6.5%	6.0%
PCP	0.41%	0.43%	0.38%	0.33%	0.29%
Substituted	0.61%	0.65%	0.56%	0.60%	2.7%

**Table 11. Non-Negative Rates by Drug/SVT Category – Urine Drug Tests
(For General U.S. Workforce, as a percentage of all non-negatives)**

(More than 350 thousand non-negative test results from January to December 2023)

Drug/SVT Category	2019	2020	2021	2022	2023
6-AM	0.09%	0.08%	0.06%	0.03%	0.03%
Acid-Base	0.16%	0.15%	0.15%	0.14%	0.13%
Amphetamines (Amphetamine/Methamphetamine)	22.7%	21.5%	22.1%	23.6%	23.9%
Barbiturates	2.2%	2.0%	1.9%	1.6%	1.4%
Benzodiazepines	4.6%	3.9%	3.7%	3.4%	3.1%
Cocaine	4.7%	3.7%	3.4%	3.6%	3.7%
Invalid	3.1%	3.0%	4.3%	5.0%	7.0%
Marijuana	53.1%	57.8%	57.5%	56.1%	53.2%
MDMA (MDMA/MDA)	0.05%	0.06%	0.03%	0.03%	0.03%
Methadone	1.7%	1.4%	1.3%	1.1%	1.1%
Opiates	4.5%	3.5%	2.9%	2.6%	2.3%
Opiates (Hydrocodone/Hydromorphone)	0.87%	0.91%	0.85%	0.91%	0.85%
Oxidizing Adulterants	0.000%	0.000%	0.000%	0.000%	0.000%
Oxycodones (Oxycodone/Oxymorphone)	1.9%	1.6%	1.6%	1.6%	1.5%
PCP	0.20%	0.16%	0.13%	0.12%	0.11%
Propoxyphene	0.005%	0.007%	0.002%	0.003%	0.002%
Substituted	0.26%	0.21%	0.21%	0.24%	1.7%

**Table 12. Non-Negative Rates by Drug/SVT Category – Urine Drug Tests
(For Combined U.S. Workforce, as a percentage of all non-negatives)**

(Nearly 430 thousand non-negative test results from January to December 2023)

Drug/SVT Category	2019	2020	2021	2022	2023
6-AM	0.14%	0.12%	0.08%	0.04%	0.04%
Acid-Base	0.19%	0.18%	0.17%	0.17%	0.16%
Amphetamines (Amphetamine/Methamphetamine)	22.9%	22.2%	22.8%	24.2%	24.3%
Barbiturates	1.8%	1.7%	1.6%	1.3%	1.2%
Benzodiazepines	3.9%	3.3%	3.1%	2.8%	2.5%
Cocaine	5.4%	4.4%	4.1%	4.2%	4.4%
Invalid	3.8%	3.8%	5.2%	6.0%	8.4%
Marijuana	49.7%	53.6%	53.7%	52.6%	49.3%
MDMA (MDMA/MDA)	0.06%	0.07%	0.04%	0.04%	0.04%
Methadone	1.4%	1.1%	1.1%	0.93%	0.89%
Opiates	4.4%	3.6%	2.9%	2.6%	2.3%
Opiates (Hydrocodone/Hydromorphone)	2.7%	2.7%	2.3%	2.2%	2.1%
Oxidizing Adulterants	0.000%	0.000%	0.000%	0.000%	0.000%
Oxycodones (Oxycodone/Oxymorphone)	3.1%	2.7%	2.5%	2.4%	2.4%
PCP	0.23%	0.20%	0.17%	0.16%	0.14%
Propoxyphene	0.004%	0.006%	0.002%	0.003%	0.002%
Substituted	0.31%	0.28%	0.26%	0.30%	1.9%

**Table 13. Positivity Rates by Testing Category – Oral Fluid Drug Tests
(For General U.S. Workforce)**

(More than 1.3 million tests from January to December 2023)

2019	2020	2021	2022	2023
10.5%	13.6%	7.3%	3.2%	3.3%

**Table 14. Positivity Rates by Testing Reason – Oral Fluid Drug Tests
(For General U.S. Workforce)**

(More than 1.3 million tests from January to December 2023)

Testing Reason	2019	2020	2021	2022	2023
Post-Accident	5.4%	5.8%	8.5%	9.9%	10.9%
Pre-Employment	10.7%	13.9%	7.1%	2.8%	3.0%
Random	6.0%	5.6%	5.5%	4.2%	4.2%

**Table 15. Positivity Rates by Drug Category – Oral Fluid Drug Tests
(For General U.S. Workforce)**

(More than 1.3 million tests from January to December 2023)

Drug Category	2019	2020	2021	2022	2023
Amphetamine	0.67%	0.71%	0.80%	0.74%	0.84%
Cocaine/Metabolite	0.57%	0.58%	0.85%	0.83%	1.1%
Marijuana	9.1%	12.3%	14.8%	10.4%	9.9%
Methamphetamine	0.49%	0.53%	0.67%	0.70%	0.66%
Opiates	0.35%	0.31%	0.27%	0.22%	0.17%
Oxycodones	0.28%	0.24%	0.24%	0.23%	0.20%
PCP	0.05%	0.04%	0.05%	0.04%	0.03%

**Table 16. Positivity Rates by Testing Category – Hair Drug Tests
(For General U.S. Workforce)**

(Nearly 73 thousand tests from January to December 2023)

2019	2020	2021	2022	2023
11.2%	12.8%	13.1%	13.1%	15.5%

**Table 17. Positivity Rates by Testing Reason – Hair Drug Tests
(For General U.S. Workforce)**

(Nearly 73 thousand tests from January to December 2023)

Testing Reason	2019	2020	2021	2022	2023
Pre-Employment	9.0%	9.8%	10.1%	9.9%	12.5%
Random	12.0%	16.7%	18.3%	19.8%	19.1%

**Table 18a. Positivity Rates by Drug Category – Hair Drug Tests
(For General U.S. Workforce)**

(Old Technology)

Drug Category	2019	2020	2021
Amphetamines (Methamphetamine)	2.4%	2.6%	2.4%
Cocaine	3.2%	3.2%	2.8%
Marijuana	7.1%	8.7%	9.8%
Opiates	0.32%	0.29%	0.20%
PCP	0.012%	0.03%	0.012%

**Table 18b. Positivity Rates by Drug Category – Hair Drug Tests
(For General U.S. Workforce)**

(Nearly 73 thousand tests from January to December 2023 – New Technology)

Drug Category		2021	2022	2023
6-AM		0.08%	0.05%	0.04%
Amphetamine		1.8%	1.7%	1.6%
Benzoylcegonine		1.1%	1.1%	1.3%
Cocaine		2.7%	2.9%	3.4%
Marijuana		9.5%	10.3%	12.5%
MDA		0.03%	0.02%	0.02%
MDMA		0.13%	0.08%	0.09%
Methamphetamine		2.1%	1.9%	1.8%
Opiates (Codeine/Hydrocodone)		0.37%	0.29%	0.24%
Opiates (Morphine/Hydromorphone)		0.06%	0.04%	0.03%
Oxycodone		0.60%	0.56%	0.45%
Oxymorphone		0.03%	0.05%	0.03%
PCP		0.02%	0.02%	0.02%

Table 19. Post-Accident vs. Pre-Employment Positivity Rates for Marijuana – Urine Drug Tests (For Federally Mandated, Safety-Sensitive Workforce, as a percentage of all such tests)

(More than 2.8 million tests from January to December 2023)

Drug Category	2015	2016	2017	2018	2019	2020	2021	2022	2023
Pre-Employment (PE)	0.90%	0.93%	0.99%	1.0%	1.0%	0.95%	1.1%	1.3%	1.2%
Post-Accident (PA)	1.1%	1.2%	1.3%	1.5%	1.6%	1.6%	1.8%	2.1%	2.2%
% Difference PE vs. PA	22.2%	29.0%	31.3%	50.0%	60.0%	68.4%	63.6%	61.5%	83.3%

Table 20. Post-Accident vs. Pre-Employment Positivity Rates for Marijuana – Urine Drug Tests (For General U.S. Workforce, as a percentage of all such tests)

(More than 5.5 million tests from January to December 2023)

Drug Category	2015	2016	2017	2018	2019	2020	2021	2022	2023
Pre-Employment (PE)	2.3%	2.4%	2.6%	2.8%	3.1%	3.7%	4.1%	4.6%	4.8%
Post-Accident (PA)	3.5%	3.8%	4.2%	4.8%	5.7%	6.4%	6.7%	7.3%	7.5%
% Difference PE vs. PA	52.2%	58.3%	61.5%	71.4%	83.9%	73.0%	63.4%	58.7%	56.3%

Table 21. Post-Accident vs. Pre-Employment Positivity Rates for Cocaine – Urine Drug Tests (For Federally Mandated, Safety-Sensitive Workforce, as a percentage of all such tests)

(More than 2.8 million tests from January to December 2023)

Drug Category	2019	2020	2021	2022	2023
Pre-Employment (PE)	0.27%	0.21%	0.21%	0.21%	0.21%
Post-Accident (PA)	0.47%	0.44%	0.46%	0.43%	0.46%
% Difference PE vs. PA	74.1%	109.5%	119.0%	104.8%	119.0%

Table 22. Post-Accident vs. Pre-Employment Positivity Rates for Cocaine – Urine Drug Tests (For General U.S. Workforce, as a percentage of all such tests)

(More than 5.5 million tests from January to December 2023)

Drug Category	2019	2020	2021	2022	2023
Pre-Employment (PE)	0.23%	0.18%	0.18%	0.20%	0.21%
Post-Accident (PA)	0.73%	0.63%	0.66%	0.66%	0.71%
% Difference PE vs. PA	217.4%	250.0%	266.7%	230.0%	238.1%

Table 23. Post-Accident vs. Pre-Employment Positivity Rates for Opiates (Hydrocodone/Hydromorphone) – Urine Drug Tests (For Federally Mandated, Safety-Sensitive Workforce, as a percentage of all such tests)

(More than 2.8 million tests from January to December 2023)

Drug Category	2019	2020	2021	2022	2023
Pre-Employment (PE)	0.27%	0.22%	0.21%	0.18%	0.17%
Post-Accident (PA)	0.89%	0.81%	0.75%	0.68%	0.60%
% Difference PE vs. PA	229.6%	268.2%	257.1%	277.8%	252.9%

Table 24. Post-Accident vs. Pre-Employment Positivity Rates for Opiates (Hydrocodone/Hydromorphone) – Urine Drug Tests (For General U.S. Workforce, as a percentage of all such tests)

(More than 5.5 million tests from January to December 2023)

Drug Category	2019	2020	2021	2022	2023
Pre-Employment (PE)	0.26%	0.23%	0.24%	0.24%	0.20%
Post-Accident (PA)	1.1%	0.95%	1.0%	1.0%	0.91%
% Difference PE vs. PA	323.1%	313.0%	316.7%	316.7%	355.0%

Table 25. Post-Accident vs. Pre-Employment Positivity Rates for Oxycodones (Oxycodone/Oxymorphone) – Urine Drug Tests (For Federally Mandated, Safety-Sensitive Workforce, as a percentage of all such tests)

(More than 2.8 million tests from January to December 2023)

Drug Category	2019	2020	2021	2022	2023
Pre-Employment (PE)	0.22%	0.17%	0.17%	0.16%	0.15%
Post-Accident (PA)	0.58%	0.52%	0.50%	0.44%	0.49%
% Difference PE vs. PA	163.6%	205.9%	194.1%	175.0%	226.7%

Table 26. Post-Accident vs. Pre-Employment Positivity Rates for Oxycodones (Oxycodone/Oxymorphone) – Urine Drug Tests (For General U.S. Workforce, as a percentage of all such tests)

(More than 5.5 million tests from January to December 2023)

Drug Category	2019	2020	2021	2022	2023
Pre-Employment (PE)	0.28%	0.24%	0.24%	0.24%	0.23%
Post-Accident (PA)	0.77%	0.62%	0.72%	0.69%	0.65%
% Difference PE vs. PA	175.0%	158.3%	200.0%	187.5%	182.6%

Table 27. Marijuana Positivity by 2023 State Legalized Use Status – Urine Drug Tests (For Federally Mandated, Safety-Sensitive Workforce, as a percentage of all tests for Marijuana Metabolite)

(More than 2.8 million tests from January to December 2023)

Drug Category	2015	2016	2017	2018	2019	2020	2021	2022	2023
Recreational Use	0.75%	0.84%	0.89%	0.95%	0.97%	0.89%	0.96%	1.1%	1.1%
Medical Use Only	0.70%	0.76%	0.82%	0.85%	0.87%	0.77%	0.81%	0.90%	0.88%
Neither Recreational nor Medical Use	0.68%	0.75%	0.82%	0.87%	0.83%	0.72%	0.78%	0.89%	0.83%
National	0.71%	0.78%	0.84%	0.88%	0.88%	0.79%	0.86%	0.98%	0.95%

Table 28. Marijuana Positivity by 2023 State Legalized Use Status – Urine Drug Tests (For General U.S. Workforce, as a percentage of all tests for Marijuana Metabolite)

(More than 5.5 million tests from January to December 2023)

Drug Category	2015	2016	2017	2018	2019	2020	2021	2022	2023
Recreational Use	2.4%	2.6%	2.7%	3.2%	3.7%	4.3%	5.0%	5.7%	5.8%
Medical Use Only	2.0%	2.1%	2.1%	2.4%	2.7%	3.1%	3.5%	3.9%	4.0%
Neither Recreational nor Medical Use	2.7%	2.7%	2.8%	2.7%	2.7%	3.0%	3.0%	3.1%	3.3%
National	2.4%	2.5%	2.6%	2.8%	3.1%	3.6%	3.9%	4.3%	4.5%