Urine and Oral Fluid Testing Comparison

COMPARISONS AT A GLANCE

	Urine	Oral Fluid
Setting	Used as workplace standard and for federally regulated testing e.g., Dept. of Transportation (DOT). Also used for long-term patient management and agencies that test a wide range of drugs.	Ideal for detecting recent drug abuse. Popular with programs that require convenient, gender-neutral specimen collection. Not used for regulated workplace testing (DOT).
Detection Window	Ideal for detecting historical drug use (1-20 days). Estimates depend on the substance, amount, and frequency of use.	Ideal for detecting recent drug use (4-24 hours). Estimates depend on the substance, amount, and frequency of use.
Collection Process	May require gender-specific staff to observe collection (depends on agency policy). Potentially cumbersome for female donors. Issues with "shy bladder."	Conveniently collected on-location. Specimen directly and easily observed. No gender-specific staff needed.
Specimen Tampering	Possibility for adulteration if collection not observed.	Minimal chance of specimen adulteration.
Multiple Specimens	If problems occur during collection, and another specimen is required, donor may not be able to provide urine immediately.	Additional oral fluid specimens can be provided immediately, or within minutes when mouth is dry.
Price	Less expensive when comparing actual urine to oral fluid tests. Wider range of urine test panels and drug configurations available.	Cost-effective when considering collection overhead factors: reduced collection time, no need for gender specific staff, or separate rest room/collection facility.

RAPID SCREENING DEVICES

	Urine Screening Devices	Oral Fluid Screening Devices
Test Method	Lateral flow chromatographic immunoassay screen targets multiple drugs and drug metabolites in urine.	Lateral flow chromatographic immunoassay screen targets multiple drugs and drug metabolites in oral fluid.
Accuracy	Qualitative screen provides a preliminary result.	Qualitative screen provides a preliminary result.
Device Types	Collection/test cups, dip cards, cassettes.	Collection mouth swab plus test device.
Result Time	Typically 5 minutes. *(Varies by manufacturer)*	Typically 10 minutes. *(Varies by manufacturer)*
Storage	Room temperature with approximate 24 month shelf life. *(Varies by manufacturer)*	Room temperature with approximate 18 month shelf life. *(Varies by manufacturer)*
Advantages	Simple to follow procedures. Rapid test results on-location.	Simple to follow procedures. Convenient collections and rapid test results on-location.
Disadvantages	Adulteration concerns. "Shy bladder" concerns (difficulty urinating). May require separate, gender specific collection facility. Cross-reaction interferences can arise, thus false-positive results are possible.	Most U.S. states require use of a FDA cleared device for initial testing in a workplace setting. At present, only one device is cleared: Oratect®. Cross-reaction interferences can arise.

LABORATORY TESTING SERVICES

	Urine Laboratory Testing Services	Oral Fluid Laboratory Testing Services
Test Method	Initial screening may feature EIA, GC/MS, or LC/MS/MS[1]. Presumptive positive specimens may be confirmed by a second, more sensitive test method: GC/MS or LC/MS/MS. *(Varies by lab)*	Initial screening may feature EIA, GC/MS, or LC/MS/MS[1]. Presumptive positive specimens may be confirmed by a second, more sensitive test method: GC/MS or LC/MS/MS. *(Varies by lab)*
Accuracy	Alere's test methods are scientifically accepted, provide highly specific drug identification, and are legally defensible.	Alere's test methods are scientifically accepted, provide highly specific drug identification, and are legally defensible.
Turnaround Time	24 hours for negative results, 24-72 hours for positive results[1].	48 hours for negative results, 48-72 hours for positive results[1].
Advantages	Accurately detects a broad range of drugs, detailed toxicology reports, and technical staff support. Permitted for federally regulated testing e.g., DOT.	Accurately detects a broad range of drugs, detailed toxicology reports, and technical staff support.
Disadvantages	Adulteration concerns. Shipping and handling requirements.	Currently, not permitted for federally regulated testing e.g., DOT. Shipping and handling requirements.

1) Test methods and cutoffs vary by laboratory. Enzyme immunoassay (EIA), gas chromatography/mass spectrometry (GC/MS), or liquid chromatography/mass spectrometry/mass spectrometry (LC/MS/MS).
2) Turnarounds vary by laboratory, but typical result turnaround based on time of specimen receipt to the lab. Excludes specimens received Saturday.

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