



NATIONAL MEDICAL SERVICES

May 27, 2005

Dear Valued Client:

In our continuing effort to provide you with the highest quality toxicology laboratory services available, we have compiled the enclosed packet of important changes regarding a number of tests we perform. Listed below are the types of changes included in this packet.

Category	Type of Change
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|------|--|
| I. | Tests that have had changes to their method/CPT code, units of measurement, scope of analysis or specimen requirements |
| II. | Tests that have been discontinued |
| III. | Tests that have had reference comment changes |

Please be advised that the changes listed in this packet will go into effect on **September 1, 2005**. Please use this packet of information to update your computer systems/records. These changes are important to ensure standardization of our mutual laboratory databases.

We apologize if this causes you any inconvenience. If you have any questions about the information contained in this packet, please call our Client Support Department at (866) 522-2206. Thank you for your continued support of National Medical Services and your assistance in implementing these changes.

Sincerely,

National Medical Services, Inc.

Database Changes - Summary

Categories:

- I: Method/CPT Code, Units, Scope of Analysis and Specimen Requirements
- II: Discontinued tests
- III: Reference comment changes

Test Code	Test Name	Category		
		I	II	III
0088U	Acetonitrile Exposure Profile, Urine	•		•
0093U	Acetonitrile Biouptake Survey, Urine	•		•
0094B	Acetonylacetone, Blood		•	
0094SP	Acetonylacetone, Serum/Plasma		•	
0094U	Acetonylacetone, Urine	•		•
0095U	Acetonylacetone Profile, Urine		•	
0148U	Acrylonitrile Exposure Profile, Urine	•		•
0152U	Acrylonitrile Overexposure Survey, Urine	•		•
0457U	Aromatic Solvents Panel, Urine	•		•
0615SP	Benzthiazide, Serum/Plasma			•
0872U	Solvent Profile, Urine	•		•
0938B	Calcium, Blood	•		
0938FL	Calcium, Fluid	•		
0938SP	Calcium, Serum/Plasma	•		
0938TI	Calcium, Tissue	•		
0938U	Calcium, Urine	•		
0940P	Calcium Survey, Plasma	•		
1073B	Chlordecone, Blood		•	
1073SP	Chlordecone, Serum/Plasma		•	
1073U	Chlordecone, Urine		•	
1562U	Dichloromethane Uptake Marker Survey, Urine	•		
1873U	Drug Screen IV, Urine (Forensic)		•	
2049U	Ethylene Glycol Overexposure Profile, Urine	•		•
2134U	Formic Acid, Urine	•		
2280U	Hexacarbon Exposure Profile, Urine	•		•
2288U	Hexane Overexposure Biouptake Survey, Urine	•		•
2289U	Hexane Exposure Biouptake, Urine	•		•
2409U	Inhalants Panel, Urine	•		•
2416U	Inhalants Metabolites Panel, Urine	•		•
2417U	Inhalant Intoxicants Survey, Urine	•		•
2426U	Inhalants and Metabolites Panel, Urine	•		•
2427U	Inhalants Survey (Comprehensive), Urine	•		•
2490B	Lead and ZPP, Blood	•		
2494B	Lead, Micro and EP (Pediatric), Blood	•		
2649UH	Mercury, 24 Hour Urine		•	
2836U	Methanol Exposure Profile, Urine	•		•
2973U	Methyl Bromide Exposure Profile, Urine	•		
2975U	Methyl Bromide Exposure Survey, Urine	•		
3621U	Phenol Exposure, Urine	•		•
4440B	Thiocyanate, Blood		•	
4440U	Thiocyanate Urine			•
4480B	Thymol, Blood	•		
4885B	ZPP (Zinc Protoporphyrin), Blood	•		
4885R	ZPP (Zinc Protoporphyrin), RBCs	•		
5522B	Mercury, Organic Confirmation, Blood			•

National Medical Services, Inc.

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Database Changes - Summary

Categories:

- I: Method/CPT Code, Units, Scope of Analysis and Specimen Requirements
- II: Discontinued tests
- III: Reference comment changes

Test Code	Test Name	Category		
		I	II	III
5707U	Heroin Confirmation, Urine			•
6317U	Semi Conductor Panel, Urine			•
8247B	Carbital Profile, Blood (Forensic)		•	
8247FL	Carbital Profile, Fluid (Forensic)		•	
8247SP	Carbital Profile, Serum/Plasma (Forensic)		•	
8247U	Carbital Profile, Urine (Forensic)		•	
8434B	Secobarbital, Blood (Forensic)		•	
8434SP	Secobarbital, Serum/Plasma (Forensic)		•	
8434U	Secobarbital, Urine (Forensic)		•	
9216B	Mercury Total and Organic			•
9256B	Quinine/Quinidine Screen, Blood		•	
9256SP	Quinine/Quinidine Screen, Serum/Plasma		•	
9256U	Quinine/Quinidine Screen, Urine		•	
9400B	Drugs of Abuse - Medical Professionals, Blood (Forensic)	•		
9400SP	Drugs of Abuse - Medical Professionals, Serum/Plasma (Forensic)	•		
9400U	Drugs of Abuse - Medical Professionals, Urine (Forensic)	•		
9410U	Butalbital Screen, Urine	•		

Changes effective:
September 1, 2005

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TEST CHANGES – CATEGORY I

Method/CPT Code, Units of Measurement, Scope of Analysis and Specimen Requirements

Test Code	Test Name	Method/CPT Code Changes	Unit Changes
0093U	Acetonitrile Biouptake Survey, Urine <ul style="list-style-type: none"> • Thiocyanate • Thiocyanate (Creatinine correction) • Creatinine • Acetaldehyde • Formic Acid • Formic Acid (Creatinine correction) Formic Acid Method was changed.	IC (84430) IC C (82570) GC (82000) Headspace GC (83921) Headspace GC	
0088U	Acetonitrile Exposure Profile, Urine <ul style="list-style-type: none"> • Formic Acid • Formic Acid (Creatinine correction) • Thiocyanate • Thiocyanate (Creatinine correction) • Creatinine Formic Acid Method was changed.	Headspace GC (83921) Headspace GC IC (84430) IC C (82570)	
0094U	2,5-Hexanedione, Urine <ul style="list-style-type: none"> • 2,5-Hexanedione (unhydrolyzed) Test Name was changed. Creatinine, 2,5-Hexandione and 2,5-Hexanedione (Creatinine correction) were removed. 2,5-Hexandione (unhydrolyzed) [mg/L; GC] was added.	GC (84600)	
0148U	Acrylonitrile Exposure Profile, Urine <ul style="list-style-type: none"> • Formic Acid • Formic Acid (Creatinine correction) • Thiocyanate • Thiocyanate (Creatinine correction) • Creatinine Formic Acid Method was changed.	Headspace GC (83921) Headspace GC IC (84430) IC C (82570)	
0152U	Acrylonitrile Overexposure Survey, Urine <ul style="list-style-type: none"> • Thiocyanate • Thiocyanate (Creatinine correction) • Formic Acid • Formic Acid (Creatinine correction) • Creatinine Formic Acid Method was changed.	IC (84430) IC Headspace GC (83921) Headspace GC C (82570)	
0457U	Aromatic Solvents Panel, Urine Scope of Analysis: Creatinine, o-Cresol, o-Cresol (Creatinine correction), p-and/or m-Cresol, Phenol - Total, Phenol – Total (Creatinine correction), Ethylphenol, Ethylphenol (Creatinine correction), Hippuric Acid, Hippuric Acid (Creatinine correction), Mandelic Acid, Mandelic Acid (Creatinine correction), Phenylglyoxylic Acid, Phenylglyoxylic Acid (Creatinine correction), Methylhippuric Acid, Methylhippuric Acid (Creatinine correction), S-Phenylmercapturic Acid, S-Phenylmercapturic Acid (Creatinine correction), t,t-Muconic Acid, t,t-Muconic Acid (Creatinine correction) Phenol and Phenol (Creatinine correction) were removed. Phenol – Total [mg/L; GC] and Phenol – Total (Creatinine correction) [mg/g Creat; GC] were added.		

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Method/CPT Code, Units of Measurement, Scope of Analysis and Specimen Requirements

Test Code	Test Name	Method/CPT Code Changes	Unit Changes
9410U	Butalbital Screen, Urine • Barbiturates Butalbital was removed. Barbiturates [mcg/mL; ELISA] was added.	ELISA (80101)	
0938B	Calcium, Blood • Calcium Calcium Method was changed.	FAAS (82310)	
0938FL	Calcium, Fluid • Calcium Calcium Method was changed.	FAAS (82310)	
0938SP	Calcium, Serum/Plasma • Calcium Calcium Method was changed.	FAAS (82310)	
0938TI	Calcium, Tissue • Calcium Calcium Method was changed.	FAAS (82310)	
0938U	Calcium, Urine • Calcium Calcium Method was changed.	FAAS (82310)	
0940P	Calcium Survey, Plasma • Calcium Calcium Method was changed.	FAAS (82310)	
1562U	Dichloromethane Uptake Marker Survey, Urine • Formic Acid • Formic Acid (Creatinine correction) • Creatinine Formic Acid Method was changed.	Headspace GC (83921) Headspace GC C (82570)	
9400B Specimen Requirements: Notes:	Drugs of Abuse - Medical Professionals, Blood (Forensic) 10 mL Blood Submit with Chain of Custody. Frozen requirement was removed.		
9400SP Specimen Requirements: Notes:	Drugs of Abuse - Medical Professionals, Serum/Plasma (Forensic) 10 mL Serum or Plasma Submit with Chain of Custody. Frozen requirement was removed.		
9400U Specimen Requirements: Notes:	Drugs of Abuse - Medical Professionals, Urine (Forensic) 10 mL Urine Submit with Chain of Custody. Frozen requirement was removed.		

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Method/CPT Code, Units of Measurement, Scope of Analysis and Specimen Requirements

Test Code	Test Name	Method/CPT Code Changes	Unit Changes
2049U	Ethylene Glycol Overexposure Profile, Urine <ul style="list-style-type: none"> • Oxalate • Oxalate (Creatinine correction) • Creatinine • Ethylene Glycol • Ethylene Glycol (Creatinine correction) • Formic Acid • Formic Acid (Creatinine correction) Formic Acid (Creatinine correction) [mg/g; GC] was added. Formic Acid Method was changed.	EZA (83945) EZA C (82570) GC (82693) GC Headspace GC (83921) Headspace GC	
2134U	Formic Acid, Urine <ul style="list-style-type: none"> • Creatinine • Formic Acid • Formic Acid (Creatinine correction) Formic Acid Method was changed.	C (82570) Headspace GC (83921) Headspace GC	
2280U Scope of Analysis:	Hexacarbon Exposure Profile, Urine Creatinine, Phenol - Total, Phenol – Total (Creatinine correction), 2-Hexanol - Total, 2-Hexanol – Total (Creatinine correction), 2,5-Hexanedione - Total, 2,5-Hexanedione - Total (Creatinine correction), Cyclohexanol – Total, Cyclohexanol – Total (Creatinine correction) Phenol, Phenol (Creatinine correction), 2-Hexanol, 2-Hexanol (Creatinine correction), 2,5-Hexandione, 2,5-Hexanedione (Creatinine correction), Cyclohexanol and Cyclohexanol (Creatinine correction) were removed. Phenol - Total [mg/L; GC], Phenol – Total (Creatinine correction) [mg/g Creat; GC], 2-Hexanol - Total [mg/L; GC], 2-Hexanol – Total (Creatinine correction) [mg/g Creat; GC], 2,5-Hexandione - Total [mg/L; GC], 2,5-Hexanedione – Total (Creatinine correction) [mg/g Creat; GC], Cyclohexanol - Total [mg/L; GC], Cyclohexanol – Total (Creatinine correction) [mg/g Creat; GC] were added.		
2289U	Hexane Exposure Biouptake, Urine <ul style="list-style-type: none"> • 2,5-Hexanedione (unhydrolyzed) Creatinine, 2,5-Hexandione and 2,5-Hexanedione (Creatinine correction) were removed. 2,5-Hexandione (unhydrolyzed) [mg/L; GC] was added.		
2288U	Hexane Overexposure Biouptake Survey, Urine <ul style="list-style-type: none"> • 2,5-Hexanedione (unhydrolyzed) Creatinine, 2,5-Hexandione and 2,5-Hexanedione (Creatinine correction) were removed. 2,5-Hexandione (unhydrolyzed) [mg/L; GC] was added.		

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Test Code	Test Name	Method/CPT Code Changes	Unit Changes
2409U Scope of Analysis:	Inhalants Panel, Urine n-Butanol, Isobutanol, Sec-Butanol, Tert-Butanol, n-Amyl Alcohol, Iso-Amyl Alcohol, Benzene, Ethyl Benzene, Styrene, Toluene, Xylenes (o,m,p), n-Heptane, n-Hexane, Methylpentanes (2- and 3- Iso), Pentane, Ethanol, Isopropanol, n-Propanol, Methanol, Acetaldehyde, Acetone, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Methyl n-Butyl Ketone, Ethyl Acetate, Diethyl Ether, Methyl Acrylate, Methyl Tertiary Butyl Ether, Nitrite, Nitrate, Phenol - Total, o-Cresol, Hippuric Acid, Methylhippuric Acid, Mandelic Acid Phenol and duplicate n-Butanol compound were removed. Phenol - Total [mg/L; GC] was added. Order of reported analytes was changed.		
2416U Scope of Analysis:	Inhalants Metabolites Panel, Urine Phenol - Total, o-Cresol, Hippuric Acid, Methylhippuric Acid, Mandelic Acid, Phenylglyoxylic Acid, Trichlororganic Metabolites Phenol was removed. Phenol - Total [mg/L; GC] was added.		
2417U Scope of Analysis:	Inhalant Intoxicants Survey, Urine Phenol - Total, o-Cresol, Hippuric Acid, Methylhippuric Acid, Trichlororganic Metabolites Phenol was removed. Phenol - Total [mg/L; GC] was added.		
2426U Scope of Analysis:	Inhalants and Metabolites Panel, Urine Phenol - Total, o-Cresol, Acetone, Ethanol, Isopropanol, Methanol, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Hippuric Acid, Methylhippuric Acid, Mandelic Acid, Phenylglyoxylic Acid, Trichlororganic Metabolites Phenol was removed. Phenol - Total [mg/L; GC] was added.		
2427U Scope of Analysis:	Inhalants Survey (Comprehensive), Urine Phenol -Total, o-Cresol, Acetone, Ethanol, Isopropanol, Methanol, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Hippuric Acid, Methylhippuric Acid, Mandelic Acid, Phenylglyoxylic Acid, Trichlororganic Metabolites Phenol was removed. Phenol - Total [mg/L; GC] was added.		
2490B Specimen Requirements: Notes:	Lead and ZPP, Blood 2 mL EDTA Blood Protection from light is required. Failure to submit a light protected sample will result in cancellation. All venipunctures should be performed using a trace metal free royal blue top tube. Light protection requirement was added.		
2494B Specimen Requirements: Notes:	Lead, Micro and EP (Pediatric), Blood 3 mL EDTA Blood Protection from light is required. Failure to submit a light protected sample will result in cancellation. All venipunctures should be performed using a trace metal free royal blue top tube. Light protection requirement was added.		

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TEST CHANGES – CATEGORY I

Method/CPT Code, Units of Measurement, Scope of Analysis and Specimen Requirements

Test Code	Test Name	Method/CPT Code Changes	Unit Changes
2836U	Methanol Exposure Profile, Urine <ul style="list-style-type: none"> • Creatinine • Formic Acid • Formic Acid (Creatinine correction) • Methanol Formic Acid Method was changed. Methanol [mg/dL; GC; new CPT=84600] was added.	C (82570) Headspace GC (83921) Headspace GC GC (84600)	
2973U	Methyl Bromide Exposure Profile, Urine <ul style="list-style-type: none"> • Creatinine • Formic Acid • Formic Acid (Creatinine correction) • Bromide Formic Acid Method was changed.	C (82570) Headspace GC (83921) Headspace GC IC (82491)	
2975U	Methyl Bromide Exposure Survey, Urine <ul style="list-style-type: none"> • Creatinine • Formic Acid • Formic Acid (Creatinine correction) • Bromide Formic Acid Method was changed.	C (82570) Headspace GC (83921) Headspace GC IC (82491)	
3621U	Phenol Exposure, Urine <ul style="list-style-type: none"> • Creatinine • Phenol – Total • Phenol – Total (Creatinine correction) Phenol, Phenol – (Creatinine correction) were removed. Phenol - Total [mg/L; GC/MS], Phenol – Total (Creatinine correction) were added.		
0872U Scope of Analysis:	Solvent Profile, Urine Trichloroacetic Acid, Trichloroacetic Acid (Creatinine correction), Creatinine, Trichloroethanol - Total, o-Cresol, p-and/or m-Cresol, Phenol - Total, Phenol – Total (Creatinine correction), Hippuric Acid, Hippuric Acid (Creatinine correction), Mandelic Acid, Mandelic Acid (Creatinine correction), Phenylglyoxylic Acid, Phenylglyoxylic Acid (Creatinine correction), Methylhippuric Acid, Methylhippuric Acid (Creatinine correction), S-Phenylmercapturic Acid, S-Phenylmercapturic Acid (Creatinine correction), t,t-Muconic Acid, t,t-Muconic Acid (Creatinine correction) Phenol, Phenol – (Creatinine correction) was removed. Phenol – Total, Phenol – Total (Creatinine correction) [mg/g Creat; GC] were added.		
4480B Specimen Requirements:	Thymol, Blood 7 mL Sodium Fluoride or Potassium Oxalate Blood (gray top tube) Preservative was changed.		
4885B Specimen Requirements: Notes:	ZPP (Zinc Protoporphyrin), Blood 0.5 mL EDTA Blood (lavender top tube) Protection from light is required. Failure to submit a light protected sample will result in cancellation. Light protection requirement was added.		

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TEST CHANGES – CATEGORY I

Method/CPT Code, Units of Measurement, Scope of Analysis and Specimen Requirements

Test Code	Test Name	Method/CPT Code Changes	Unit Changes
4885R Specimen Requirements: Notes:	ZPP (Zinc Protoporphyrin), RBCs 0.5 mL RBCs Protection from light is required. Failure to submit a light protected sample will result in cancellation. Light protection requirement was added.		

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DISCONTINUED TESTS – CATEGORY II

Test Code	Test Name	Alternative Test
0094B	Acetonylacetone, Blood	2290B Hexane, n-, Blood
0094SP	Acetonylacetone, Serum/Plasma	2290 Hexane, n-, Serum/Plasma
0095U	Acetonylacetone Profile, Urine	0094U 2,5-Hexanedione, Urine
8247B	Carbital Profile, Blood (Forensic)	1019B Carbital Profile, Blood
8247FL	Carbital Profile, Fluid (Forensic)	1019FL Carbital Profile, Fluid
8247SP	Carbital Profile, Serum/Plasma (Forensic)	1019SP Carbital Profile, Serum/Plasma
8247U	Carbital Profile, Urine (Forensic)	1019U Carbital Profile, Urine
1073B	Chlordecone, Blood	No alternate test available.
1073SP	Chlordecone, Serum/Plasma	No alternate test available.
1073U	Chlordecone, Urine	No alternate test available.
1873U	Drug Screen IV, Urine (Forensic)	No alternate test available.
2649UH	Mercury, 24 Hour Urine	2670UH Mercury, 24 Hour Urine
9256B	Quinine/Quinidine Screen, Blood	4075B Quinine/Quinidine Differentiation, Blood
9256SP	Quinine/Quinidine Screen, Serum/Plasma	4075SP Quinine/Quinidine Differentiation, Serum/Plasma
9256U	Quinine/Quinidine Screen, Urine	4075U Quinine/Quinidine Differentiation, Urine
8434B	Secobarbital, Blood (Forensic)	9417B Secobarbital Screen, Blood
8434SP	Secobarbital, Serum/Plasma (Forensic)	9417SP Secobarbital Screen, Serum/Plasma
8434U	Secobarbital, Urine (Forensic)	9417U Secobarbital Screen, Urine
4440B	Thiocyanate, Blood	No alternate test available.

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REFERENCE COMMENT CHANGES – CATEGORY III

Test Code	Test Name	New Reference Comment
0094U	Acetylacetone, Urine <ul style="list-style-type: none"> 2,5-Hexanedione (unhydrolyzed) 	Hexane Exposure – unhydrolyzed 2,5 Hexanedione in an end of workweek urine: Biological Exposure Index (ACGIH): 0.4 mg/L.
0093U	Acetonitrile Biouptake Survey, Urine <ul style="list-style-type: none"> Thiocyanate (Creatinine correction) 	Non-smokers: Up to 6 mg/g
0088U	Acetonitrile Exposure Profile, Urine <ul style="list-style-type: none"> Thiocyanate (Creatinine correction) 	Non-smokers: Up to 6 mg/g
0148U	Acrylonitrile Exposure Profile, Urine <ul style="list-style-type: none"> Thiocyanate (Creatinine correction) 	Non-smokers: Up to 6 mg/g
0152U	Acrylonitrile Overexposure Survey, Urine <ul style="list-style-type: none"> Thiocyanate (Creatinine correction) 	Non-smokers: Up to 6 mg/g
0457U	Aromatic Solvents Profile, Urine <ul style="list-style-type: none"> Phenol - Total 	Less than 10 mg/L in unexposed individuals. Less than 30 mg/L when chronically exposed to 0.5 to 4.0 ppm Benzene in air. Average 200 mg/L during chronic exposure to 25 ppm Benzene in air.
0615SP	Benzthiazide, Serum/Plasma <ul style="list-style-type: none"> Benzthiazide 	Following an oral dose of 50 mg, peak plasma concentrations of about 0.008 and 0.02 mcg/mL were attained in 3 hours. Note: Reporting limit greater than reported therapeutic range due to analytical limitations.
2049U	Ethylene Glycol Overexposure Profile, Urine <ul style="list-style-type: none"> Formic Acid (Creatinine corrected) 	Biological Action Level: 97 mg Formic Acid/g Creatinine in a pre-shift specimen.
5707U	Heroin Confirmation, Urine <ul style="list-style-type: none"> Diacetylmorphine Morphine (Unconjugated) 	Heroin is unstable in biological specimens and degrades to 6-MAM and Morphine over time. [Reference comment was removed.]

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REFERENCE COMMENT CHANGES – CATEGORY III

Test Code	Test Name	New Reference Comment
2280U	Hexacarbon Exposure Profile, Urine <ul style="list-style-type: none"> • 2,5-Hexanedione - Total • 2,5-Hexanedione – Total (Creatinine corrected) • Phenol - Total • Phenol – Total (Creatinine corrected) • 2-Hexanol - Total • Cyclohexanol – Total 	<p>Workers exposed to an n-Hexane air concentration of 182 mg/cubic meter had 2,5-Hexanedione concentrations ranging from 0.4 - 22 mg/L (mean, 5.4 mg/L).</p> <p>Following exposure to 50 ppm n-Hexane: 2 mg 2,5-Hexanedione/g Creatinine measured in an end of shift on first day or workweek urine.</p> <p>Less than 10 mg/L in unexposed individuals. Less than 30 mg/L when chronically exposed to 0.5 to 4.0 ppm Benzene in air. Average 200 mg/L during chronic exposure to 25 ppm Benzene in air.</p> <p>Biological Exposure Index (ACGIH): 250 mg Phenol/g Creatinine measured in an end of shift urine.</p> <p>Average 0.2 mg/L in workers exposed to n-Hexane air concentrations of 182 mg/cubic meter.</p> <p>Concentrations range from 0.12 - 8.2 mg/L at the end of a shift with air concentrations of 5 to 211 ppm.</p>
2289U	Hexane Exposure Biouptake, Urine <ul style="list-style-type: none"> • 2,5-Hexanedione (unhydrolyzed) 	<p>Hexane Exposure – unhydrolyzed 2,5 Hexanedione in an end of workweek urine: Biological Exposure Index (ACGIH): 0.4 mg/L</p>
2288U	Hexane Overexposure Biouptake Survey, Urine <ul style="list-style-type: none"> • 2,5-Hexanedione (unhydrolyzed) 	<p>Hexane Exposure – unhydrolyzed 2,5 Hexanedione in an end of workweek urine: Biological Exposure Index (ACGIH): 0.4 mg/L</p>
2409U	Inhalants Panel, Urine <ul style="list-style-type: none"> • o-Cresol • Phenol – Total 	<p>Biological Exposure Index (ACGIH) for monitoring exposure to Toluene: 0.5 mg o-Cresol/L urine measured in an end of shift specimen.</p> <p>Less than 10 mg/L in unexposed individuals. Less than 30 mg/L when chronically exposed to 0.5 to 4.0 ppm Benzene in air. Average 200 mg/L during chronic exposure to 25 ppm Benzene in air.</p>

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REFERENCE COMMENT CHANGES – CATEGORY III

Test Code	Test Name	New Reference Comment
2416U	Inhalants Metabolites Panel, Urine <ul style="list-style-type: none"> • o-Cresol • Phenol – Total 	<p>Biological Exposure Index (ACGIH) for monitoring exposure to Toluene: 0.5 mg o-Cresol/L urine measured in an end of shift specimen.</p> <p>Less than 10 mg/L in unexposed individuals. Less than 30 mg/L when chronically exposed to 0.5 to 4.0 ppm Benzene in air. Average 200 mg/L during chronic exposure to 25 ppm Benzene in air.</p>
2417U	Inhalant Intoxicants Survey, Urine <ul style="list-style-type: none"> • o-Cresol • Phenol - Total 	<p>Biological Exposure Index (ACGIH) for monitoring exposure to Toluene: 0.5 mg o-Cresol/L urine measured in an end of shift specimen.</p> <p>Less than 10 mg/L in unexposed individuals. Less than 30 mg/L when chronically exposed to 0.5 to 4.0 ppm Benzene in air. Average 200 mg/L during chronic exposure to 25 ppm Benzene in air.</p>
2426U	Inhalants and Metabolites Panel, Urine <ul style="list-style-type: none"> • o-Cresol • Phenol - Total 	<p>Biological Exposure Index (ACGIH) for monitoring exposure to Toluene: 0.5 mg o-Cresol/L urine measured in an end of shift specimen.</p> <p>Less than 10 mg/L in unexposed individuals. Less than 30 mg/L when chronically exposed to 0.5 to 4.0 ppm Benzene in air. Average 200 mg/L during chronic exposure to 25 ppm Benzene in air.</p>
2427U	Inhalants Survey (Comprehensive), Urine <ul style="list-style-type: none"> • o-Cresol • Phenol – Total 	<p>Biological Exposure Index (ACGIH) for monitoring exposure to Toluene: 0.5 mg o-Cresol/L urine measured in an end of shift specimen.</p> <p>Less than 10 mg/L in unexposed individuals. Less than 30 mg/L when chronically exposed to 0.5 to 4.0 ppm Benzene in air. Average 200 mg/L during chronic exposure to 25 ppm Benzene in air.</p>

REFERENCE COMMENT CHANGES – CATEGORY III

Test Code	Test Name	New Reference Comment
9216B	Mercury Total and Organic <ul style="list-style-type: none"> Mercury, Total 	<p>Normally, total Blood Mercury ranges up to 6 mcg/L in populations with low fish consumption. When Total Mercury result is none detected, Organic Mercury is not performed. When Total Mercury result is positive, Organic Mercury is automatically performed at an additional fee.</p> <p>Biological Exposure Index (ACGIH) for monitoring exposure to Mercury: 15 mcg Total Inorganic Mercury/L in blood collected at end of shift at end of workweek. Various States require that Blood Mercury levels above certain cutoffs must be reported to the State in which the patient resides. Please contact us if you need assistance in supplying your State with the required information.</p>
5522B	Mercury, Organic Confirmation, Blood <ul style="list-style-type: none"> Mercury, Organic 	<p>Blood organic Mercury concentrations among 1709 women who were participants in the National Health and Nutrition Examination Survey in 1999 and 2000 (1999-2000 NHANES) were 0.6 mcg/L at the 50th percentile up to 6.7 mcg/L (95th percentile).</p>
2836U	Methanol Exposure Profile, Urine <ul style="list-style-type: none"> Methanol Formic Acid (Creatinine corrected) 	<p>Biological Exposure Index (ACGIH): 1.5 mg Methanol/dL measured in an end of shift urine.</p> <p>Biological Action Level: 97 mg Formic Acid/g Creatinine in a pre-shift specimen.</p>
3621U	Phenol Exposure, Urine <ul style="list-style-type: none"> Phenol - Total 	<p>Less than 10 mg/L in unexposed individuals. Less than 30 mg/L when chronically exposed to 0.5 to 4.0 ppm Benzene in air. Average 200 mg/L during chronic exposure to 25 ppm Benzene in air.</p>
6317U	Semi Conductor Panel, Urine <ul style="list-style-type: none"> Arsenic 	<p>Reference range (unexposed population): Less than 20 mcg/L. Seafood consumption within 2 to 3 days before specimen collection can markedly increase total Arsenic levels.</p>
0872U	Solvent Profile, Urine <ul style="list-style-type: none"> Phenol – Total 	<p>Less than 10 mg/L in unexposed individuals. Less than 30 mg/L when chronically exposed to 0.5 to 4.0 ppm Benzene in air. Average 200 mg/L during chronic exposure to 25 ppm Benzene in air.</p>

Changes effective:
September 1, 2005

National Medical Services
3701 Welsh Road, Willow Grove, PA 19090
800-522-6671
nms@nmslab.com

REFERENCE COMMENT CHANGES – CATEGORY III

Test Code	Test Name	New Reference Comment
4440U	Thiocyanate Urine <ul style="list-style-type: none">• Thiocyanate (Creatinine correction)	Non-smokers: Up to 6 mg/g