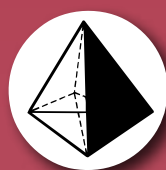


Polycyclic Aromatic Hydrocarbon (PAH) Standards



AccuStandard[®]

Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic Aromatic Hydrocarbons (PAHs – also commonly called Polynuclear Aromatic Hydrocarbons) are compounds that are composed of multiple fused benzene rings. These compounds occur naturally in coal, crude oil, asphalt and gasoline. They are also formed by combustion of coal, oil, gas, wood, garbage and tobacco.

PAHs have been identified as endocrine disruptors, and have been linked to several types of cancers. They are persistent in the environment, and can bioaccumulate. These compounds are regulated by many different agencies around the world to protect human health and the environment.

Polycyclic Aromatic Hydrocarbons (PAHs) Compounds									
Compound Synonym	CAS Conc.	Matrix	Cat. No.	Unit	Compound Synonym	CAS. Conc.	Matrix	Cat. No.	Unit
Acenaphthene	83-32-9	NEAT	H-108N	100 mg	Dibenz[a,h]acridine	226-36-8	NEAT	H-172N	10 mg
	50 µg/mL	Toluene	H-108S	1 mL		50 µg/mL	Toluene	H-172S	1 mL
Acenaphthylene	208-96-8	NEAT	H-125N	100 mg	Dibenz[a,j]acridine	224-42-0	NEAT	H-173N	10 mg
	50 µg/mL	Toluene	H-125S	1 mL		50 µg/mL	Toluene	H-173S	1 mL
Acridine	260-94-6	NEAT	H-187N	100 mg	Dibenz[a,c]anthracene <i>1,2,3,4-Dibenzanthracene</i>	215-58-7	NEAT	H-134N	10 mg
	50 µg/mL	Toluene	H-187S	1 mL		50 µg/mL	Toluene	H-134S	1 mL
Anthanthrene	191-26-4	NEAT	H-109N	10 mg	Dibenz[a,h]anthracene <i>1,2,5,6-Dibenzanthracene</i>	53-70-3	NEAT	H-135N	10 mg
	50 µg/mL	Toluene	H-109S	1 mL		50 µg/mL	Toluene	H-135S	1 mL
Anthracene	120-12-7	NEAT	H-110N	100 mg	Dibenz[a,e]fluoranthene	5385-75-1	----	-----	-----
	50 µg/mL	Toluene	H-110S	1 mL		50 µg/mL	Toluene	H-247S	1 mL
Azulene	275-51-4	NEAT	H-127N	10 mg	Dibenz[a,e]pyrene <i>1,2,4,5-Dibenzopyrene</i>	192-65-4	----	-----	-----
	50 µg/mL	Toluene	H-127S	1 mL		50 µg/mL	Toluene	H-138S	1 mL
Benz[a]anthracene	56-55-3	NEAT	H-100N	10 mg	Dibenz[a,h]pyrene	189-64-0	NEAT	H-177N	10 mg
<i>1,2-Benzanthracene</i>	50 µg/mL	Toluene	H-100S	1 mL		50 µg/mL	Toluene	H-177S	1 mL
Benz[a]anthracene-7,12-dione <i>1,2-Benzoanthraquinone</i>	2498-66-0	NEAT	H-111N	10 mg	Dibenz[a,i]pyrene	189-55-9	NEAT	H-178N	5 mg
	50 µg/mL	Toluene	H-111S	1 mL		50 µg/mL	Toluene	H-178S	1 mL
Benz[a]fluorene <i>1,2-Benzofluorene</i>	238-84-6	----	-----	-----	Dibenz[a,l]pyrene	191-30-0	----	-----	-----
	50 µg/mL	Toluene	H-130S	1 mL		50 µg/mL	Toluene	H-179S	1 mL
Benz[a]pyrene (Ames grade) <i>3,4-Benzopyrene</i>	50-32-8	NEAT	H-169N	10 mg	7H-Dibenzo[c,g]carbazole	194-59-2	----	-----	-----
	50 µg/mL	Toluene	H-169S	1 mL		50 µg/mL	Toluene	H-176S	1 mL
Benz[e]pyrene	192-97-2	NEAT	H-112N	10 mg	Dibenzo-p-dioxin	262-12-4	NEAT	D-100N	10 mg
	50 µg/mL	Toluene	H-112S	1 mL		50 µg/mL	Isooctane	D-100S	1 mL
Benzo[b]anthracene <i>2,3-Benzanthracene</i>	92-24-0	NEAT	H-159N	10 mg	Dibenzofuran	132-64-9	NEAT	F-100N	50 mg
	50 µg/mL	Toluene	H-159S	1 mL		50 µg/mL	Isooctane	F-100S	1 mL
Benzo[b]chrysene	214-17-5	NEAT	H-183N	5 mg	Dibenzothiophene Diphenylene sulfide	132-65-0	NEAT	H-117N	100 mg
	50 µg/mL	Toluene	H-183S	1 mL		50 µg/mL	Toluene	H-117S	1 mL
Benzo[b]fluoranthene <i>Benzo[e]acephenanthrylene</i>	205-99-2	NEAT	H-128N	10 mg	Dibenz[a,l]pentacene <i>1,2,8,9-Dibenzpentacene</i>	227-09-8	----	-----	-----
	50 µg/mL	Toluene	H-128S	1 mL		50 µg/mL	Toluene	H-139S	1 mL
Benzo[j]fluoranthene	205-82-3	NEAT	H-171N	10 mg	9,10-Dihydroanthracene	613-31-0	NEAT	H-140N	100 mg
	50 µg/mL	Toluene	H-171S	1 mL		50 µg/mL	Toluene	H-140S	1 mL
Benzo[k]fluoranthene	207-08-9	NEAT	H-129N	10 mg	12,12A-Dihydro-3,9-dimethylbenz[a]anthracene	----	----	-----	-----
	50 µg/mL	Toluene	H-129S	1 mL		50 µg/mL	Toluene	H-188S	1 mL
Benzo[b]fluorene <i>2,3-Benzofluorene</i>	243-17-4	NEAT	H-180N	10 mg	Diindeno[1,2,3-cd-1',2',3'-lm]perylene <i>Perilanthene</i>	188-94-3	----	-----	-----
	50 µg/mL	Toluene	H-180S	1 mL		50 µg/mL	Toluene	H-141S	1 mL
Benzo[g,h,i]perylene <i>1,12-Benzoperylene</i>	191-24-2	NEAT	H-103N	10 mg	2,3-Dimethylantracene	613-06-9	NEAT	H-189N	10 mg
	50 µg/mL	Toluene	H-103S	1 mL		50 µg/mL	Toluene	H-189S	1 mL
Benzo[c]phenanthrene	195-19-7	NEAT	H-244N	10 mg	9,10-Dimethylantracene	781-43-1	NEAT	H-190N	10 mg
	50 µg/mL	Toluene	H-244S	1 mL		50 µg/mL	Toluene	H-190S	1 mL
2,3-Benzofuran	271-89-6	NEAT	H-237N	10 mg	3,9-Dimethylbenz[a]anthracene	316-51-8	----	-----	-----
	50 µg/mL	Toluene	H-237S	1 mL		50 µg/mL	Toluene	H-191S	1 mL
5,6-Benzoquinoline <i>Benzo[f]quinoline</i>	85-02-9	NEAT	H-113N-10MG	10 mg	6,8-Dimethylbenz[a]anthracene	317-64-6	----	-----	-----
	50 µg/mL	Toluene	H-113S	1 mL		50 µg/mL	Toluene	H-192S	1 mL
7,8-Benzoquinoline	230-27-3	NEAT	H-245N	100 mg	7,12-Dimethylbenz[a]anthracene	57-97-6	NEAT	H-174N	10 mg
	50 µg/mL	Toluene	H-245S	1 mL		50 µg/mL	Toluene	H-174S	1 mL
2,2'-Binaphthyl	612-78-2	NEAT	H-239N	50 mg	7,10-Dimethylbenz[a]pyrene	63104-33-6	----	-----	-----
	50 µg/mL	Toluene	H-239S	1 mL		50 µg/mL	Toluene	H-195S	1 mL
Biphenyl	92-52-4	NEAT	H-133N	500 mg	1,12-Dimethylbenzo[c]phenanthrene	4076-43-1	----	-----	-----
	50 µg/mL	Toluene	H-133S	1 mL		50 µg/mL	Toluene	H-193S	1 mL
Carbazole	86-74-8	NEAT	H-114N	100 mg	5,8-Dimethylbenzo[c]phenanthrene	54886-63-9	----	-----	-----
	50 µg/mL	Toluene	H-114S	1 mL		50 µg/mL	Toluene	H-194S	1 mL
Chrysene <i>Benzo[a]phenanthrene</i>	218-01-9	NEAT	H-115N	100 mg	1,2-Dimethylnaphthalene	573-98-8	NEAT	H-197N	10 mg
	50 µg/mL	Toluene	H-115S	1 mL		50 µg/mL	Toluene	H-197S	1 mL
Coronene	191-07-1	NEAT	H-116N	5 mg	1,3-Dimethylnaphthalene (96%)	575-41-7	NEAT	H-198N	10 mg
	50 µg/mL	Toluene	H-116S	1 mL		50 µg/mL	Toluene	H-198S	1 mL
Cyclopenta[c,d]pyrene	27208-37-3	----	-----	-----	1,4-Dimethylnaphthalene (95%)	571-58-4	NEAT	H-199N	10 mg
	50 µg/mL	Toluene	H-242S	1 mL		50 µg/mL	Toluene	H-199S	1 mL

Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic Aromatic Hydrocarbons (PAHs) Compounds

Compound Synonym	CAS Conc.	Matrix	Cat. No.	Unit	Compound Synonym	CAS. Conc.	Matrix	Cat. No.	Unit
1,5-Dimethylnaphthalene	571-61-9	NEAT	H-200N	10 mg	4-Methylbenzo[c]phenanthrene	4076-40-8	----	-----	-----
	50 µg/mL	Toluene	H-200S	1 mL		50 µg/mL	Toluene	H-211S	1 mL
1,6-Dimethylnaphthalene	575-43-9	NEAT	H-201N	10 mg	5-Methylbenzo[c]phenanthrene	652-04-0	----	-----	-----
	50 µg/mL	Toluene	H-201S	1 mL		50 µg/mL	Toluene	H-212S	1 mL
1,8-Dimethylnaphthalene (95%)	569-41-5	NEAT	H-202N	10 mg	3-Methylcholanthrene	56-49-5	NEAT	H-170N	10 mg
	50 µg/mL	Toluene	H-202S	1 mL		50 µg/mL	Toluene	H-170S	1 mL
2,6-Dimethylnaphthalene	581-42-0	NEAT	H-161N	10 mg	4-Methylchrysene	3351-30-2	----	-----	-----
	50 µg/mL	Toluene	H-161S	1 mL		50 µg/mL	Toluene	H-228S	1 mL
2,7-Dimethylnaphthalene	582-16-1	NEAT	H-203N	10 mg	5-Methylchrysene	3697-24-3	----	-----	-----
	50 µg/mL	Toluene	H-203S	1 mL		50 µg/mL	Toluene	H-243S	1 mL
3,6-Dimethylphenanthrene	1576-67-6	NEAT	H-142N-5MG	5 mg	6-Methylchrysene	1705-85-7	NEAT	H-175N	10 mg
	50 µg/mL	Toluene	H-142S	1 mL		50 µg/mL	Toluene	H-175S	1 mL
9,10-Diphenylanthracene	1499-10-1	NEAT	H-185N	100 mg	2-Methylfluoranthene	33543-31-6	NEAT	H-182N-5MG	5 mg
	50 µg/mL	Toluene	H-185S	1 mL		50 µg/mL	Toluene	H-182S	1 mL
Dodecahydrotriphenylene	1610-39-5	NEAT	H-144N	100 mg	1-Methylnaphthalene	90-12-0	NEAT	H-001N	100 mg
	50 µg/mL	Toluene	H-144S	1 mL		50 µg/mL	Toluene	H-001S	1 mL
6-Ethylchrysene	2732-58-3	NEAT	H-264N	10 mg	2-Methylnaphthalene	91-57-6	NEAT	H-002N	100 mg
	----	----	-----	----		50 µg/mL	Toluene	H-002S	1 mL
Fluoranthene	206-44-0	NEAT	H-118N	100 mg	9-Methyl-9-phenylfluorene	56849-83-3	NEAT	H-204N	10 mg
	50 µg/mL	Toluene	H-118S	1 mL		50 µg/mL	Toluene	H-204S	1 mL
Fluorene	86-73-7	NEAT	H-146N	100 mg	1-Methylphenanthrene	832-69-9	----	-----	-----
	50 µg/mL	Toluene	H-146S	1 mL		50 µg/mL	Toluene	H-162S	1 mL
Indan	496-11-7	NEAT	H-231N	100 mg	2-Methylphenanthrene	2531-84-2	----	-----	-----
	50 µg/mL	Toluene	H-231S	1 mL		50 µg/mL	Toluene	H-003S	1 mL
Indene	95-13-6	NEAT	H-230N	100 mg	3-Methylphenanthro[3,4-c]phenanthrene	83844-21-7	----	-----	-----
	50 µg/mL	Toluene	H-230S	1 mL		50 µg/mL	Toluene	H-224S	1 mL
Indeno[1,2,3-cd]pyrene o-Phenylene pyrene	193-39-5	NEAT	H-157N	10 mg	1-Methylpyrene	2381-71-7	----	-----	-----
	50 µg/mL	Toluene	H-157S	1 mL		50 µg/mL	Toluene	H-233S	1 mL
Indole	120-72-9	NEAT	H-236N	100 mg	4,5-Methylenephenanthrene	203-64-5	----	-----	-----
	50 µg/mL	Toluene	H-236S	1 mL		50 µg/mL	Toluene	H-119S	1 mL
Isoquinoline	119-65-3	NEAT	H-232N	100 mg	Naphthalene	91-20-3	NEAT	H-152N	100 mg
	50 µg/mL	Toluene	H-232S	1 mL		50 µg/mL	Toluene	H-152S	1 mL
1-Methylantracene	610-48-0	NEAT	H-222N	10 mg	Perylene	198-55-0	NEAT	H-121N	10 mg
	50 µg/mL	Toluene	H-222S	1 mL		50 µg/mL	Toluene	H-121S	1 mL
2-Methylantracene	613-12-7	NEAT	H-148N	10 mg	Phenanthrene	85-01-8	NEAT	H-122N	100 mg
	50 µg/mL	Toluene	H-148S	1 mL		50 µg/mL	Toluene	H-122S	1 mL
9-Methylantracene	779-02-2	NEAT	H-149N	10 mg	9-Phenylanthracene	602-55-1	NEAT	H-156N	100 mg
	50 µg/mL	Toluene	H-149S	1 mL		50 µg/mL	Toluene	H-156S	1 mL
1-Methylbenz[a]anthracene	2498-77-3	----	-----	----	1-Phenylnaphthalene	605-02-7	NEAT	H-246N	100 mg
	50 µg/mL	Toluene	H-213S	1 mL		50 µg/mL	Toluene	H-246S	1 mL
2-Methylbenz[a]anthracene	2498-76-2	----	-----	----	2-Phenylnaphthalene	612-94-2	NEAT	H-158N	5 mg
	50 µg/mL	Toluene	H-214S	1 mL		50 µg/mL	Toluene	H-158S	1 mL
3-Methylbenz[a]anthracene	2498-75-1	----	-----	----	Picene	213-46-7	----	-----	-----
	50 µg/mL	Toluene	H-215S	1 mL		50 µg/mL	Toluene	H-184S	1 mL
4-Methylbenz[a]anthracene	316-49-4	----	-----	----	Pyrene	129-00-0	NEAT	H-123N	100 mg
	50 µg/mL	Toluene	H-216S	1 mL		50 µg/mL	Toluene	H-123S	1 mL
5-Methylbenz[a]anthracene	2319-96-2	----	-----	----	Pyrrole	109-97-7	NEAT	H-229N	100 mg
	50 µg/mL	Toluene	H-217S	1 mL		50 µg/mL	Toluene	H-229S	1 mL
6-Methylbenz[a]anthracene	316-14-3	----	-----	----	Quinoline	91-22-5	NEAT	H-186N	100 mg
	50 µg/mL	Toluene	H-218S	1 mL		50 µg/mL	Toluene	H-186S	1 mL
7-Methylbenz[a]anthracene	2541-69-7	----	-----	----	2,3,6,7-Tetraethylbiphenylene	----	NEAT	H-225N	10 mg
	50 µg/mL	Toluene	H-219S	1 mL		50 µg/mL	Toluene	H-225S	1 mL
9-Methylbenz[a]anthracene	2381-16-0	----	-----	----	1,2,3,4-Tetrahydrofluoranthene	20279-21-4	NEAT	H-165N	10 mg
	50 µg/mL	Toluene	H-220S	1 mL		50 µg/mL	Toluene	H-165S	1 mL
10-Methylbenz[a]anthracene	2381-15-9	----	-----	----	Thianaphthene	95-15-8	NEAT	H-238N	100 mg
	50 µg/mL	Toluene	H-221S	1 mL		50 µg/mL	Toluene	H-238S	1 mL
7-Methylbenz[a]pyrene	63041-77-0	NEAT	H-223N	10 mg	Thianthrene	92-85-3	NEAT	H-241N	100 mg
	50 µg/mL	Toluene	H-223S	1 mL		----	----	-----	-----
8-Methylbenz[a]pyrene	63041-76-9	----	-----	----	4,6,8-Trimethylazulene	941-81-1	NEAT	H-226N	10 mg
	50 µg/mL	Toluene	H-205S	1 mL		50 µg/mL	Toluene	H-226S	1 mL
9-Methylbenz[a]pyrene	70644-19-8	----	-----	----	8,9,11-Trimethylbenz[a]anthracene	74845-58-2	----	-----	-----
	50 µg/mL	Toluene	H-206S	1 mL		50 µg/mL	Toluene	H-227S	1 mL
10-Methylbenz[a]pyrene	63104-32-5	----	-----	----	1,6,7-Trimethylnaphthalene	2245-38-7	NEAT	H-268N-5MG	5 mg
	50 µg/mL	Toluene	H-207S	1 mL		50 µg/mL	Toluene	H-268S	1 mL
1-Methylbenzo[c]phenanthrene	4076-39-5	----	-----	----	Triphenylene	217-59-4	NEAT	H-235N	10 mg
	50 µg/mL	Toluene	H-208S	1 mL		50 µg/mL	Toluene	H-235S	1 mL
2-Methylbenzo[c]phenanthrene	2606-85-1	----	-----	----	Truxene (95%)	548-35-6	NEAT	H-124N	100 mg
	50 µg/mL	Toluene	H-209S	1 mL		50 µg/mL	Toluene	H-124S	1 mL
3-Methylbenzo[c]phenanthrene	2381-19-3	----	-----	----					
	50 µg/mL	Toluene	H-210S	1 mL					

Polycyclic Aromatic Hydrocarbons (PAHs)

PAH Sets

These Polycyclic Aromatic Hydrocarbon sets are used as reference standards for the predominant species found in ambient air samples. This library of standards was compiled as a working list used by the EPA based on their research and literature surveys. One set is offered as individual neat compounds, the other as individual solutions. The solution mix also contains all the compounds in one solution.

PAH Set, Individual Solutions, and Mix

PAH Solution Set

Z-013-SET 17 x 1 mL
Each at 0.2 mg/mL at stated solvent plus Z-013-17 Solution Mix

Compound	Solvent	Cat. No.	Unit
Acenaphthene	MeOH	Z-013-01	1 mL
Acenaphthylene	MeOH	Z-013-02	1 mL
Anthracene	MeOH	Z-013-03	1 mL
Benz[a]anthracene	CH ₂ Cl ₂	Z-013-04	1 mL
Benz[a]pyrene	CH ₂ Cl ₂	Z-013-05	1 mL
Benzo[b]fluoranthene	MeOH	Z-013-06	1 mL
Benzo[g,h,i]perylene	CH ₂ Cl ₂	Z-013-07	1 mL
Benzo[k]fluoranthene	CH ₂ Cl ₂	Z-013-08	1 mL
Chrysene	CH ₂ Cl ₂	Z-013-09	1 mL
Dibenz[a,h]anthracene	CH ₂ Cl ₂	Z-013-10	1 mL
Fluoranthene	CH ₂ Cl ₂	Z-013-11	1 mL
Fluorene	MeOH	Z-013-12	1 mL
Indeno[1,2,3-cd]pyrene	MeOH	Z-013-13	1 mL
Naphthalene	MeOH	Z-013-14	1 mL
Phenanthrene (98%)	CH ₂ Cl ₂	Z-013-15	1 mL
Pyrene	CH ₂ Cl ₂	Z-013-16	1 mL

PAH Solution Mix

Z-013-17 1 x 1 mL
0.2 mg/mL each in MeOH:CH₂Cl₂ (50:50) 16 comps.

Acenaphthene	Chrysene
Acenaphthylene	Dibenz[a,h]anthracene
Anthracene	Fluoranthene
Benz[a]anthracene	Fluorene
Benz[a]pyrene	Indeno[1,2,3-cd]pyrene
Benzo[b]fluoranthene	Naphthalene
Benzo[g,h,i]perylene	Phenanthrene
Benzo[k]fluoranthene	Pyrene

PAH Neat Sets

PAH Neat Set

Z-001-SET 20 x 5 mg

Acenaphthene	Chrysene
Anthanthrene	Coronene
Anthracene	Dibenzo[thiophene
1,2-Benzanthracene	Fluoranthene
Benz[a]anthracene-7,12-dione (95%)	4,5-Methylenephenanthrene
Benzo[g,h,i]perylene	Naphthalene
Benz[a]pyrene	Perylene
Benz[e]pyrene	Phenanthrene
5,6-Benzoquinoline	Pyrene
Carbazole	Truxene (95%)

PAH Neat Set

Z-013N-SET 16 x 10 mg

Acenaphthene	Chrysene
Acenaphthylene	Dibenz[a,h]anthracene
Anthracene	Fluoranthene
Benz[a]anthracene	Fluorene
Benz[a]pyrene	Indeno[1,2,3-cd]pyrene
Benzo[b]fluoranthene	Naphthalene
Benzo[g,h,i]perylene	Phenanthrene
Benzo[k]fluoranthene	Pyrene



Nitro-Polycyclic Aromatic Hydrocarbons

The atmosphere of most industrialized areas of the world contains Polynuclear Aromatic Polycyclic (PAHs) and Nitrogen Oxides (NOx)¹. Wherever these compounds exist together they react and form Nitro-PAHs, which are highly mutagenic.

Scientists have found Nitro-PAHs in diesel particulates², carbon black^{3,4} and ambient air particulates⁵. These compounds are the major contributors to the mutagenicity of the pollutants since the most common Nitro-PAH found, 1-Nitropyrene, is a potent mutagen.

AccuStandard has compiled an extensive inventory of Nitro substituted compounds including mono, di and tri Nitro-PAHs, Amino and Hydroxy substituted PAHs, Nitrotoluenes, Nitroanilines, and Nitrophenols. Most compounds are in both neat form and in solution.

Nitro-PAHs

Compound <i>Synonym</i>	CAS Conc.	Matrix	Cat. No.	Unit	Compound <i>Synonym</i>	CAS. Conc.	Matrix	Cat. No.	Unit
1-Amino-4-nitronaphthalene	776-34-1	NEAT	R-001N	100 mg	2-Nitrodibenzothiophene	6639-36-7	NEAT	R-010N	5 mg
	100 µg/mL	Toluene	R-001S	1 mL		100 µg/mL	Toluene	R-010S	1 mL
2-Nitroanthracene	3586-69-4	NEAT	R-105N	5 mg	3-Nitrofluoranthene	892-21-7	NEAT	R-013N	5 mg
	100 µg/mL	Toluene	R-105S	1 mL		100 µg/mL	Toluene	R-013S	1 mL
9-Nitroanthracene	602-60-8	NEAT	R-003N	5 mg	2-Nitrofluorene	607-57-8	NEAT	R-098N	100 mg
	100 µg/mL	Toluene	R-003S	1 mL		100 µg/mL	Toluene	R-098S	1 mL
7-Nitrobenz[a]anthracene	20268-51-3	NEAT	R-097N	5 mg	5-Nitroacenaphthene	602-87-9	NEAT	R-115N	5 mg
	100 µg/mL	Toluene	R-097S	1 mL		100 µg/mL	Toluene	R-115S	1 mL
6-Nitrobenz[a]pyrene	63041-90-7	----	-----	-----	1-Nitronaphthalene	86-57-7	NEAT	R-016N	100 mg
	100 µg/mL	Toluene	R-004S	1 mL		100 µg/mL	Toluene	R-016S	1 mL
2-Nitrobiphenyl	86-00-0	NEAT	R-005N	100 mg	2-Nitronaphthalene	581-89-5	NEAT	R-085N-10MG	10 mg
	100 µg/mL	Toluene	R-005S	1 mL		100 µg/mL	Toluene	R-085S	1 mL
3-Nitrobiphenyl	2113-58-8	NEAT	R-006N	100 mg	3-Nitrophenanthrene	17024-19-0	----	-----	-----
	100 µg/mL	Toluene	R-006S	1 mL		100 µg/mL	Toluene	R-045S	1 mL
4-Nitrobiphenyl	92-93-3	NEAT	R-007N	100 mg	9-Nitrophenanthrene	954-46-1	NEAT	R-020N	5 mg
	100 µg/mL	Toluene	R-007S	1 mL		100 µg/mL	Toluene	R-020S	1 mL
6-Nitrochrysene	7496-02-8	NEAT	R-008N	5 mg	1-Nitropyrene	5522-43-0	NEAT	R-022N	5 mg
	100 µg/mL	Toluene	R-008S	1 mL		100 µg/mL	Toluene	R-022S	1 mL
3-Nitrodibenzofuran	5410-97-9	NEAT	R-009N	5 mg					
	100 µg/mL	Toluene	R-009S	1 mL					

Di- and Tri- Nitro-PAHs

Compound <i>Synonym</i>	CAS Conc.	Matrix	Cat. No.	Unit	Compound <i>Synonym</i>	CAS. Conc.	Matrix	Cat. No.	Unit
9,10-Dinitroanthracene	33685-60-8	NEAT	R-024N	5 mg	1,5-Dinitronaphthalene	605-71-0	NEAT	R-030N	100 mg
	100 µg/mL	Toluene	R-024S	1 mL		100 µg/mL	Toluene	R-030S	1 mL
2,2'-Dinitrobiphenyl	2436-96-6	NEAT	R-025N	100 mg	1,8-Dinitronaphthalene	602-38-0	NEAT	R-031N	100 mg
	100 µg/mL	Toluene	R-025S	1 mL		100 µg/mL	Toluene	R-031S	1 mL
2,8-Dinitrodibenzothiophene	109041-38-5	NEAT	R-026N	5 mg	1,3-Dinitropyrene	75321-20-9	NEAT	R-094N	5 mg
	100 µg/mL	Toluene	R-026S	1 mL		100 µg/mL	Toluene	R-094S	1 mL
2,7-Dinitrofluorene	5405-53-8	NEAT	R-027N	100 mg	1,6-Dinitropyrene	42397-64-8	NEAT	R-032N	5 mg
	100 µg/mL	Toluene	R-027S	1 mL		100 µg/mL	Toluene	R-032S	1 mL
2,7-Dinitro-9-fluorenone	31551-45-8	NEAT	R-028N	100 mg	1,8-Dinitropyrene	42397-65-9	NEAT	R-099N	5 mg
	100 µg/mL	Toluene	R-028S	1 mL		100 µg/mL	Toluene	R-099S	1 mL
1,3-Dinitronaphthalene	606-37-1	NEAT	R-029N	100 mg	2,4,7-Trinitro-9-fluorenone	129-79-3	----	-----	-----
	100 µg/mL	Toluene	R-029S	1 mL		100 µg/mL	Toluene	R-033S	1 mL

Nitro-Aromatics

Compound <i>Synonym</i>	CAS Conc.	Matrix	Cat. No.	Unit	Compound <i>Synonym</i>	CAS. Conc.	Matrix	Cat. No.	Unit
Nitrobenzene	98-95-3	NEAT	R-047N	100 mg	2,4-Dinitrophenol	51-28-5	----	-----	-----
	100 µg/mL	Toluene	R-047S	1 mL		100 µg/mL	Toluene	R-053S	1 mL
2-Nitrotoluene	88-72-2	NEAT	R-048N	100 mg	2-Nitroaniline	88-74-4	NEAT	R-054N	100 mg
	100 µg/mL	Toluene	R-048S	1 mL		100 µg/mL	Toluene	R-054S	1 mL
2,4-Dinitrotoluene	121-14-2	NEAT	R-049N	100 mg	3-Nitroaniline	99-09-2	NEAT	R-055N	100 mg
	100 µg/mL	Toluene	R-049S	1 mL		100 µg/mL	Toluene	R-055S	1 mL
2,6-Dinitrotoluene	606-20-2	NEAT	R-050N	100 mg	4-Nitroaniline	100-01-6	NEAT	R-056N	100 mg
	100 µg/mL	Toluene	R-050S	1 mL		100 µg/mL	Toluene	R-056S	1 mL
2-Nitrophenol	88-75-5	NEAT	R-051N	100 mg	4,6-Dinitro-o-cresol 2-Methyl-4,6-dinitrophenol	534-52-1	NEAT	R-057N	100 mg
	100 µg/mL	Toluene	R-051S	1 mL		100 µg/mL	Toluene	R-057S	1 mL
4-Nitrophenol	100-02-7	NEAT	R-052N	100 mg					
	100 µg/mL	Toluene	R-052S	1 mL					

PAH Derivatives continued on next page

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- (1) Nitrated PAHs. Edited by C.M. White, Published by Huethig 1985.
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- (3) Mutagenic Activity in Photocopies, G. Lofroth et al., Science, Vol. 209, pp. 1037-9 (1980).
- (4) Nitropyrenes: Isolation, Identification and Reduction of Mutagenic Impurities in Carbon Black and Toners, H.S. Rosenkranz et al., Science, Vol. 290, pp. 1039-43 (1980).
- (5) Atmospheric Reactions of Polycyclic Aromatic Hydrocarbons: Facile Formation of Mutagenic Nitro Derivatives, J.N. Pitts, Jr. et al., Science, Vol. 202, pp. 515-8 (1978).

Polycyclic Aromatic Hydrocarbons (PAHs) Derivatives

Amino-PAHs

Compound Synonym	CAS Conc.	Matrix	Cat. No.	Unit	Compound Synonym	CAS. Conc.	Matrix	Cat. No.	Unit
2-Acetamidofluorene	53-96-3	NEAT	R-058N	10 mg	2-Aminofluorene	153-78-6	NEAT	R-066N	10 mg
	100 µg/mL	Toluene	R-058S	1 mL			Toluene	R-066S	1 mL
1-Aminoanthracene	610-49-1	NEAT	R-059N	50 mg	1-Aminonaphthalene	134-32-7	NEAT	R-067N	50 mg
	100 µg/mL	Toluene	R-059S	1 mL			Toluene	R-067S	1 mL
2-Aminoanthracene	613-13-8	NEAT	R-060N	50 mg	2-Aminonaphthalene	91-59-8	NEAT	R-084N	10 mg
	100 µg/mL	Toluene	R-060S	1 mL			Toluene	R-084S	1 mL
1-Aminoanthraquinone	82-45-1	NEAT	R-061N	50 mg	2,7-Diaminofluorene	525-64-4	NEAT	R-068N	10 mg
	100 µg/mL	Toluene	R-061S	1 mL			Toluene	R-068S	1 mL
2-Aminoanthraquinone	117-79-3	NEAT	R-093N	5 mg	1,8-Diaminonaphthalene	479-27-6	NEAT	R-069N	100 mg
	100 µg/mL	Toluene	-----	---			Toluene	R-069S	1 mL
2-Aminobiphenyl	90-41-5	NEAT	R-062N	10 mg	1,2-Diphenylhydrazine	122-66-7	NEAT	R-070N	100 mg
	100 µg/mL	Toluene	R-062S	1 mL			Toluene	R-070S	1 mL
4-Aminobiphenyl	92-67-1	NEAT	R-063N	10 mg	N-Phenyl-1-naphthylamine	90-30-2	NEAT	R-071N	50 mg
	100 µg/mL	Toluene	R-063S	1 mL			Toluene	R-071S	1 mL
6-Aminochrysene	2642-98-0	NEAT	R-065N	10 mg	o-Tolidine † 3,3'-Dimethylbenzidine	119-93-7	NEAT	R-072N	100 mg
	100 µg/mL	Toluene	R-065S	1 mL			Toluene	R-072S	1 mL

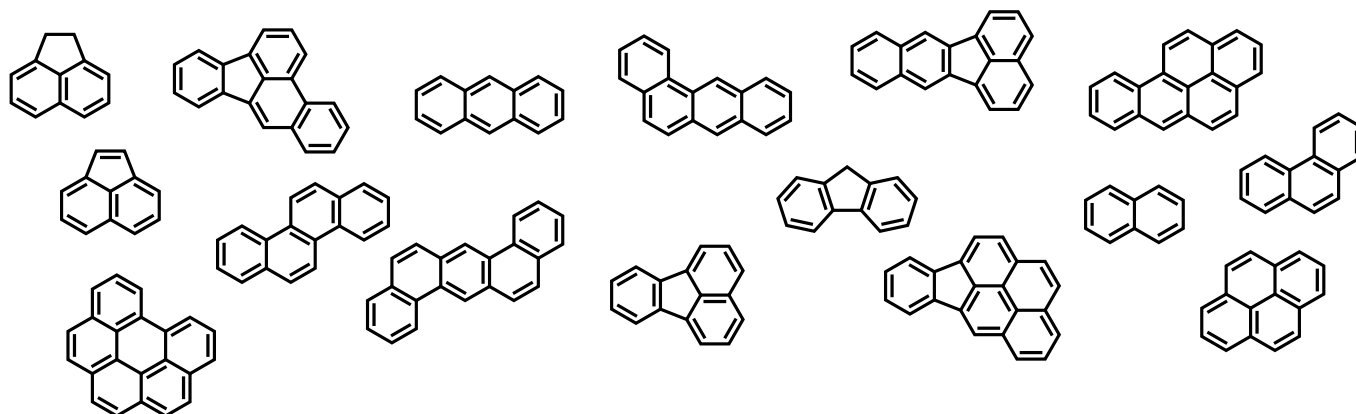
Hydroxy-PAHs

Compound Synonym	CAS Conc.	Matrix	Cat. No.	Unit	Compound Synonym	CAS. Conc.	Matrix	Cat. No.	Unit
6-Hydroxychrysene	37515-51-8	NEAT	R-095N	10 mg	1-Hydroxypyrene	5315-79-7	NEAT	R-096N	10 mg
	100 µg/mL	Toluene	R-095S	1 mL			Toluene	R-096S	1 mL

Amino-Aromatics

Compound Synonym	CAS Conc.	Matrix	Cat. No.	Unit	Compound Synonym	CAS. Conc.	Matrix	Cat. No.	Unit
2-Acetamidofluorene	53-96-3	NEAT	R-058N	10 mg	2,4-Diaminotoluene	95-80-7	NEAT	R-078N	100 mg
	100 µg/mL	Toluene	R-058S	1 mL			Toluene	R-078S	1 mL
1-Aminoanthracene	610-49-1	NEAT	R-059N	50 mg	4-Dimethylaminoazobenzene	60-11-7	NEAT	R-079N	10 mg
	100 µg/mL	Toluene	R-059S	1 mL			Toluene	R-079S	1 mL
Benzidine †	92-87-5	NEAT	R-073N	100 mg	4,4'-Methylene bis(2-chloroaniline)	101-14-4	NEAT	R-080N	50 mg
	100 µg/mL	Toluene	R-073S	1 mL			Toluene	R-080S	1 mL
3,3'-Diaminobenzidine †	91-95-2	NEAT	R-074N	50 mg	N-Methyl-N'-nitro-N-nitrosoguanidine	70-25-7	NEAT	R-081N	50 mg
	100 µg/mL	Toluene	R-074S	1 mL			Toluene	R-081S	1 mL
3,3'-Dichlorobenzidine †	91-94-1	NEAT	R-075N	50 mg	N-Phenyl-2-naphthylamine	135-88-6	NEAT	R-082N	10 mg
	100 µg/mL	Toluene	R-075S	1 mL			Toluene	R-082S	1 mL
3,3'-Dimethoxybenzidine †	119-90-4	NEAT	R-076N	50 mg	s-Triazine	290-87-9	NEAT	R-083N	10 mg
	100 µg/mL	Toluene	R-076S	1 mL			Toluene	R-083S	1 mL
4,4'-Diaminodiphenylmethane 4,4'-Methylenedianiline	101-77-9	NEAT	R-077N	100 mg					
	100 µg/mL	Toluene	R-077S	1 mL					

† Subject to oxidation



Nitrogen Containing Compounds

Nitrogen Containing Compounds									
Compound <i>Synonym</i>	CAS Conc.	Matrix	Cat. No.	Unit	Compound <i>Synonym</i>	CAS. Conc.	Matrix	Cat. No.	Unit
Azobenzene	103-33-3	----	-----	-----	2-Nitrobiphenyl	86-00-0	NEAT	R-005N	100 mg
	2 mg/mL	CH ₂ Cl ₂	Z-014B-1	1 mL		100 µg/mL	Toluene	R-005S	1 mL
2-Chloronitrobenzene	88-73-3	NEAT	R-017N	100 mg	3-Nitrobiphenyl	2113-58-8	NEAT	R-006N	100 mg
	100 µg/mL	Toluene	R-017S	1 mL		100 µg/mL	Toluene	R-006S	1 mL
4-Chloronitrobenzene	100-00-5	NEAT	R-018N	100 mg	4-Nitrobiphenyl	92-93-3	NEAT	R-007N	100 mg
	100 µg/mL	Toluene	R-018S	1 mL		100 µg/mL	Toluene	R-007S	1 mL
2,3-Dichloronitrobenzene	3209-22-1	NEAT	R-086N	100 mg	2-Nitrophenol	88-75-5	NEAT	R-051N	100 mg
	100 µg/mL	Toluene	R-086S	1 mL		100 µg/mL	Toluene	R-051S	1 mL
2,4-Dichloronitrobenzene	611-06-3	NEAT	R-087N	100 mg	4-Nitrophenol	100-02-7	NEAT	R-052N	100 mg
	100 µg/mL	Toluene	R-087S	1 mL		100 µg/mL	Toluene	R-052S	1 mL
2,5-Dichloronitrobenzene	89-61-2	NEAT	R-088N	100 mg	2-Nitrotoluene	88-72-2	NEAT	R-048N	100 mg
	100 µg/mL	Toluene	R-088S	1 mL		100 µg/mL	Toluene	R-048S	1 mL
2,2'-Dinitrobiphenyl	2436-96-6	NEAT	R-025N	100 mg	Pyridine	110-86-1	----	-----	-----
	100 µg/mL	Toluene	R-025S	1 mL		100 µg/mL	MeOH	APP-9-186-M	1 mL
2,4-Dinitrophenol	51-28-5	----	-----	-----		2 mg/mL	MeOH	APP-9-186-M-20X	1 mL
	100 µg/mL	Toluene	R-053S	1 mL		5 mg/mL	MeOH	AS-E0271	1 mL
2,4-Dinitrotoluene	121-14-2	NEAT	R-049N	100 mg		10 mg/mL	Water	M-8015B-5031-26	1 mL
	100 µg/mL	Toluene	R-049S	1 mL	2,3,4,5-Tetrachloronitrobenzene	879-39-0	NEAT	R-091N	100 mg
	100 µg/mL	MeOH	APP-9-092	1 mL	100 µg/mL	Toluene	R-091S	1 mL	
2,6-Dinitrotoluene	5 mg/mL	MeOH	AS-E0033	1 mL	2,3,5,6-Tetrachloronitrobenzene	117-18-0	NEAT	R-092N	100 mg
	606-20-2	NEAT	R-050N	100 mg	100 µg/mL	Toluene	R-092S	1 mL	
	100 µg/mL	Toluene	R-050S	1 mL	s-Triazine	290-87-9	NEAT	R-083N	10 mg
	100 µg/mL	MeOH	APP-9-093	1 mL	100 µg/mL	Toluene	R-083S	1 mL	
N-Methyl-N'-nitro-N-nitrosoguanidine	5 mg/mL	MeOH	AS-E0034	1 mL	2,3,4-Trichloronitrobenzene	17700-09-3	NEAT	R-089N	100 mg
	70-25-7	NEAT	R-081N	50 mg	100 µg/mL	Toluene	R-089S	1 mL	
	100 µg/mL	Toluene	R-081S	1 mL	2,4,5-Trichloronitrobenzene	89-69-0	NEAT	R-090N	100 mg
					100 µg/mL	Toluene	R-090S	1 mL	



Polycyclic Aromatic Hydrocarbons

Priority Pollutants, Florida Methods

Priority Pollutants - Calibration of Capillary GC/MS

The EPA procedures call for fused silica capillary column analysis of priority pollutants. These mixes are used in calibrating this analytical system. These mixtures are highly concentrated to aid in the establishment of response factors.

PAH Mix

Z-014G 1 x 1 mL
Z-014G-PAK SAVE 5 x 1 mL
 2.0 mg/mL each in CH₂Cl₂: Benzene (50:50) 16 comps.

Acenaphthene	Chrysene
Acenaphthylene	Dibenz[a,h]anthracene
Anthracene	Fluoranthene
Benz[a]anthracene	Fluorene
Benz[a]pyrene	Indeno[1,2,3-cd]pyrene
Benzo[b]fluoranthene	Naphthalene
Benzo[g,h,i]perylene	Phenanthrene
Benzo[k]fluoranthene	Pyrene

PAH Mix

Z-014G-R 1 x 1 mL
Z-014G-R-PAK SAVE 5 x 1 mL
 2.0 mg/mL each in CH₂Cl₂: Benzene (50:50) 17 comps.

Acenaphthene	Chrysene
Acenaphthylene	Dibenz[a,h]anthracene
Anthracene	Fluoranthene
Benz[a]anthracene	Fluorene
Benz[a]pyrene	Indeno[1,2,3-cd]pyrene
Benzo[b]fluoranthene	Naphthalene
Benzo[g,h,i]perylene	Phenanthrene
Benzo[k]fluoranthene	Pyrene
Carbazole	

Expanded PAH Mix

Z-014G-FL 1 x 1 mL
 2.0 mg/mL each in CH₂Cl₂: Benzene (50:50) 18 comps.

Acenaphthene	Dibenz[a,h]anthracene
Acenaphthylene	Fluoranthene
Anthracene	Fluorene
Benz[a]anthracene	Indeno[1,2,3-cd]pyrene
Benz[a]pyrene	Naphthalene
Benzo[b]fluoranthene	Phenanthrene
Benzo[g,h,i]perylene	Pyrene
Benzo[k]fluoranthene	1-Methylnaphthalene
Chrysene	2-Methylnaphthalene

Florida Administrative Code PAHs by HPLC

Expanded PAH Mix

Z-014G-FL 1 x 1 mL
 2.0 mg/mL each in CH₂Cl₂: Benzene (50:50) 18 comps.

Acenaphthene	Dibenz[a,h]anthracene
Acenaphthylene	Fluoranthene
Anthracene	Fluorene
Benz[a]anthracene	Indeno[1,2,3-cd]pyrene
Benz[a]pyrene	Naphthalene
Benzo[b]fluoranthene	Phenanthrene
Benzo[g,h,i]perylene	Pyrene
Benzo[k]fluoranthene	1-Methylnaphthalene
Chrysene	2-Methylnaphthalene

Florida Administrative Code PAHs by HPLC (continued)

Performance Check Solution

M-610-QC-FL 1 x 1 mL
M-610-QC-FL-PAK SAVE 5 x 1 mL
 At stated conc. (mg/mL) in AcCN 18 comps.

Acenaphthene	0.1	Dibenz[a,h]anthracene	0.01
Acenaphthylene	0.1	Fluoranthene	0.01
Anthracene	0.1	Fluorene	0.1
Benz[a]anthracene	0.01	Indeno[1,2,3-cd]pyrene	0.01
Benz[a]pyrene	0.01	1-Methyl naphthalene	0.1
Benzo[b]fluoranthene	0.01	2-Methyl naphthalene	0.1
Benzo[g,h,i]perylene	0.01	Naphthalene	0.1
Benzo[k]fluoranthene	0.005	Phenanthrene	0.1
Chrysene	0.01	Pyrene	0.01

Matrix Spiking Solution

M-610-MS 1 x 1 mL
M-610-MS-PAK SAVE 5 x 1 mL
 At stated conc. (mg/mL) in AcCN 6 comps.

Benz[a]pyrene	0.5	2-Methylnaphthalene	5.0
Chrysene	0.5	Phenanthrene	0.5
1-Methylnaphthalene	5.0	Pyrene	0.5

PAH Mix Additions

H-001S-002S-M-20X 1 x 1 mL
 1.0 mg/mL each in MeOH 2 comps.

1-Methyl naphthalene	2-Methyl naphthalene
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Polynuclear Aromatic Hydrocarbons (HPLC)

M-8310-FL 1 x 1 mL
M-8310-FL-PAK SAVE 5 x 1 mL
 0.5 mg/mL each in AcCN 18 comps.

M-8310-FL-SET 18 x 1 mL
 Each at stated conc. in AcCN

Acenaphthene	0.5 mg/mL	M-8310-FL-01	1 mL
Acenaphthylene	0.5 mg/mL	M-8310-FL-02	1 mL
Anthracene	0.5 mg/mL	M-8310-FL-03	1 mL
Benz[a]anthracene	0.5 mg/mL	M-8310-FL-04	1 mL
Benz[a]pyrene	0.5 mg/mL	M-8310-FL-05	1 mL
Benzo[b]fluoranthene	0.5 mg/mL	M-8310-FL-06	1 mL
Benzo[g,h,i]perylene	0.5 mg/mL	M-8310-FL-07	1 mL
Benzo[k]fluoranthene	0.5 mg/mL	M-8310-FL-08	1 mL
Chrysene	0.5 mg/mL	M-8310-FL-09	1 mL
Dibenz[a,h]anthracene	0.5 mg/mL	M-8310-FL-10	1 mL
Fluoranthene	0.5 mg/mL	M-8310-FL-11	1 mL
Fluorene	0.5 mg/mL	M-8310-FL-12	1 mL
Indeno[1,2,3-cd]pyrene	0.5 mg/mL	M-8310-FL-13	1 mL
1-Methylnaphthalene	0.5 mg/mL	M-8310-FL-14	1 mL
2-Methylnaphthalene	0.5 mg/mL	M-8310-FL-15	1 mL
Naphthalene	0.5 mg/mL	M-8310-FL-16	1 mL
Phenanthrene	0.5 mg/mL	M-8310-FL-17	1 mL
Pyrene	0.5 mg/mL	M-8310-FL-18	1 mL

Polynuclear Aromatic Hydrocarbons (HPLC)

M-8310-QC-ATI 1 x 1 mL
M-8310-QC-ATI-PAK SAVE 5 x 1 mL
 At stated conc. (µg/mL) in AcCN 18 comps.

Acenaphthene	1000	Dibenz[a,h]anthracene	200
Acenaphthylene	2000	Fluoranthene	200
Anthracene	100	Fluorene	200
Benz[a]anthracene	100	Indeno[1,2,3-cd]pyrene	100
Benz[a]pyrene	100	1-Methylnaphthalene	1000
Benzo[b]fluoranthene	200	2-Methylnaphthalene	1000
Benzo[g,h,i]perylene	200	Naphthalene	1000
Benzo[k]fluoranthene	100	Phenanthrene	100
Chrysene	100	Pyrene	100

Polycyclic Aromatic Hydrocarbons

EPA and Regional Methods

Method 550 + 550.1 PAHs by HPLC & Internal Standard

M-550-QC			
At stated conc. ($\mu\text{g/mL}$) in AcCN			
Acenaphthene	1000	Chrysene	50
Acenaphthylene	1000	Dibenz[a,h]anthracene	10
Anthracene	50	Fluoranthene	2.5
Benz[a]anthracene	1	Fluorene	100
Benz[a]pyrene	5	Indeno[1,2,3-cd]pyrene	10
Benzo[b]fluoranthene	1	Naphthalene	1000
Benzo[g,h,i]perylene	5	Phenanthrene	50
Benzo[k]fluoranthene	1	Pyrene	50

Internal Standard

M-550-IS		1 x 1 mL
0.1 mg/mL in AcCN		
4,4'-Difluorobiphenyl		

Method 610 PAHs by GC/FID or HPLC

M-610		1 x 1 mL
0.1 mg/mL each in MeOH:CH ₂ Cl ₂ (50:50)		
M-610A		16 comps.
At stated conc. in MeOH:CH ₂ Cl ₂ (50:50)		1 x 1 mL
M-610-QC		16 comps.
At stated conc. in AcCN		1 x 1 mL
		16 comps.

Compound	M-610A	M-610-QC
Acenaphthene	1.0 mg/mL	0.1 mg/mL
Acenaphthylene	2.0 mg/mL	0.1 mg/mL
Anthracene	0.1 mg/mL	0.1 mg/mL
Benz[a]anthracene	0.1 mg/mL	0.01 mg/mL
Benz[a]pyrene	0.1 mg/mL	0.01 mg/mL
Benzo[b]fluoranthene	0.2 mg/mL	0.01 mg/mL
Benzo[g,h,i]perylene	0.2 mg/mL	0.01 mg/mL
Benzo[k]fluoranthene	0.1 mg/mL	0.005 mg/mL
Chrysene	0.1 mg/mL	0.01 mg/mL
Dibenz[a,h]anthracene	0.2 mg/mL	0.01 mg/mL
Fluoranthene	0.2 mg/mL	0.01 mg/mL
Fluorene	0.2 mg/mL	0.1 mg/mL
Indeno[1,2,3-cd]pyrene	0.1 mg/mL	0.01 mg/mL
Naphthalene	1.0 mg/mL	0.1 mg/mL
Phenanthrene	0.1 mg/mL	0.1 mg/mL
Pyrene	0.1 mg/mL	0.01 mg/mL

Matrix Spiking Solution

M-610-MS		1 x 1 mL	
M-610-MS-PAK		SAVE 5 x 1 mL	
At stated conc. (mg/mL) in AcCN		6 comps.	
Benz[a]pyrene	0.5	2-Methylnaphthalene	5.0
Chrysene	0.5	Phenanthrene	0.5
1-Methylnaphthalene	5.0	Pyrene	0.5

Method 8272 PAHs by GC/MS

PAH Mix

M-8272		1 x 1 mL	
At stated conc. (mg/mL) in CH ₂ Cl ₂		12 comps.	
Naphthalene	42	Anthracene	0.6
1-Methylnaphthalene	24	Phenanthrene	5.5
2-Methylnaphthalene	20	Fluoranthene	2.1
Acenaphthylene	9	Pyrene	1.8
Acenaphthene	11	Benz(a)anthracene	0.08
Fluorene	7.6	Chrysene	0.03

Internal Standard - Deuterated Analogs

M-8272-IS		1 x 1 mL	
At stated conc. (mg/mL) in Acetone		8 comps.	
Naphthalene-d ₈	5	Phenanthrene-d ₁₀	0.96
1-Methylnaphthalene-d ₁₀	6	Fluoranthene-d ₁₀	0.93
Acenaphthene-d ₁₀	1.2	Perylene-d ₁₂	0.84
Fluorene-d ₁₀	1.2	Chrysene-d ₁₂	0.033

Method 8310 PAHs by HPLC

PAH Mix

M-8310		1 x 1 mL
M-8310-PAK		SAVE 5 x 1 mL
0.5 mg/mL each in AcCN		16 comps.
Acenaphthene		Chrysene
Acenaphthylene		Dibenz[a,h]anthracene
Anthracene		Fluoranthene
Benz[a]anthracene		Fluorene
Benz[a]pyrene		Indeno[1,2,3-cd]pyrene
Benzo[b]fluoranthene		Naphthalene
Benzo[g,h,i]perylene		Phenanthrene
Benzo[k]fluoranthene		Pyrene

PAH Quality Control Calibration Mixture

M-610-QC		1 x 1 mL	
At stated conc. (mg/mL) in AcCN		16 comps.	
Acenaphthene	0.1	Chrysene	0.01
Acenaphthylene	0.1	Dibenz[a,h]anthracene	0.01
Anthracene	0.1	Fluoranthene	0.01
Benz[a]anthracene	0.01	Fluorene	0.1
Benz[a]pyrene	0.01	Indeno[1,2,3-cd]pyrene	0.01
Benzo[b]fluoranthene	0.01	Naphthalene	0.1
Benzo[g,h,i]perylene	0.01	Phenanthrene	0.1
Benzo[k]fluoranthene	0.005	Pyrene	0.01

Surrogate Standard

M-8310-SS		1 x 1 mL
M-8310-SS-PAK		SAVE 5 x 1 mL
0.1 mg/mL in Acetonitrile		
Decafluorobiphenyl		

Internal Standard Post Supercritical Fluid Extraction

M-8310-SFE-IS-100X		1 x 1 mL
M-8310-SFE-IS-100X-PAK		SAVE 5 x 1 mL
20 mg/mL in AcCN:THF (50:50)		
Biphenyl		

Regional Methods PAHs by HPLC

PAH Mix (Quebec Ministry of Environmental)

H-QME-01		1 x 1 mL
500 $\mu\text{g/mL}$ each in CH ₂ Cl ₂ :Benzene (50:50)		24 comps.
Acenaphthene		Dibenz[a,h]anthracene
Acenaphthylene		Dibenz[a,h]pyrene
Anthracene		Dibenz[a,i]pyrene
Benz[a]anthracene		Dibenz[a,l]pyrene
Benzo[b]fluoranthene		7,12-Dimethylbenz[a]anthracene
Benzo[j]fluoranthene		Fluoranthene
Benzo[k]fluoranthene		Fluorene
Benzo[g,h,i]perylene		Indeno[1,2,3-cd]pyrene
Benzo[c]phenanthrene		3-Methylcholanthrene
Benz[a]pyrene		Naphthalene
Benz[e]pyrene		Phenanthrene
Chrysene		Pyrene

DIN-38407-17 Nitroaromatic Compounds

Examination of water, wastewater and sludge for the determination of selected nitroaromatic compounds by Gas-Liquid Chromatography

DIN38407-17		1 x 1 mL
500 $\mu\text{g/mL}$ each in MeOH		12 comps.
Nitrobenzene		3,4-Dinitrotoluene
2-Nitrotoluene		2-Amino-6-nitrotoluene
4-Nitrotoluene		4-Amino-2-nitrotoluene
1,3-Dinitrobenzene		4-Amino-2,6-dinitrotoluene
2,6-Dinitrotoluene		2-Amino-4,6-dinitrotoluene
2,4-Dinitrotoluene		2,4,6-Trinitrotoluene



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125 Market St, New Haven, CT 06513 USA

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