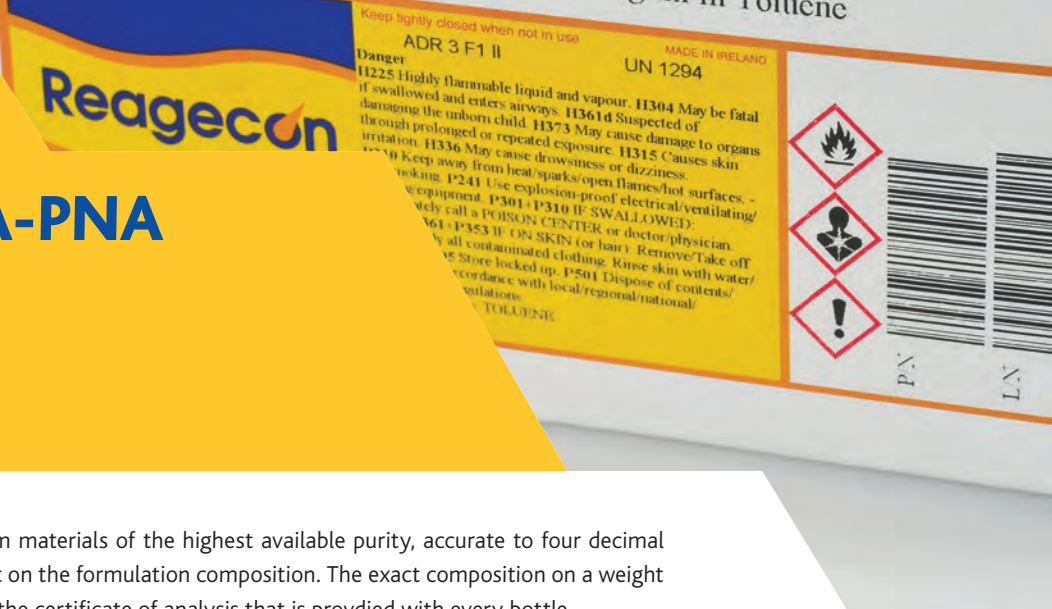


# PIANO-PONA-PNA Standards



These complex mixes are prepared from materials of the highest available purity, accurate to four decimal places, and include a detailed data sheet on the formulation composition. The exact composition on a weight % basis for each analyte is provided on the certificate of analysis that is provided with every bottle

## PIANO, PONA & PNA Standards

Product Number Reagecon	Mix Name	Constituents	Concentration	Matrix	Pack Size	ASTM
REPIANO-P	Piano Paraffins	N-Pentane	Varies per Batch	None	1ml	D6279
		N-Hexane				D6733
		N-Heptane				D5134
		N-Octane				D3710
		N-Nonane				D2789
		N-Decane				
		N-Undecane				
		N-Dodecane				
		N-Tridecane				
		N-Tetradecane				
N-Pentadecane						

Product Number Reagecon	Mix Name	Constituents	Concentration	Matrix	Pack Size	ASTM
REPIANO-I	Piano Isoparaffins	Isopentane	Varies per Batch	None	1ml	D6279
		2,3-Dimethylbutane				D6733
		2-Methylpentane				D5134
		3-Methylpentane				D3710
		2,2-Dimethylpentane				D2789
		2,4-Dimethylpentane				
		2,2,3-Trimethylbutane				
		3,3-Dimethylpentane				
		2-Methylhexane				
		2,3-Dimethylpentane				
		3-Methylhexane				
		3-Ethylpentane				
		2,2-Dimethylhexane				
		2,5-Dimethylhexane				
		2,2,3-Trimethylpentane				
		2,4-Dimethylhexane				
		2,3-Dimethylhexane				
		2-Methylheptane				
		4-Methylheptane				
		3-Methylheptane				
		3-Ethylhexane				
		3,3-Dimethylheptane				
		2,5-Dimethylheptane				
		3,5-Dimethylheptane				
		2,3-Dimethylheptane				
		3,4-Dimethylheptane				
		2-Methyloctane				
		3-Methyloctane				
		3,3-Diethylpentane				
		2,2-Dimethyloctane				
3,3-Dimethyloctane						
2,3-Dimethyloctane						
3-Ethylloctane						
2-Methylnonane						
3-Methylnonane						

Product Number Reagecon	Mix Name	Constituents	Concentration	Matrix	Pack Size	ASTM
REPIANO-A	PIANO Aromatics	Benzene	Varies per Batch	None	1ml	D6279
		Toluene				D6733
		EthylBenzene				D5134
		m-Xylene				D3710
		p-Xylene				D2789
		o-Xylene				
		Isopropylbenzene				
		n-Propylbenzene				
		1-Methyl-3-ethylbenzene				
		1-Methyl-4-ethylbenzene				
		1,3,5-Trimethylbenzene				
		1-Methyl-2-ethylbenzene				
		1,2,4-Trimethylbenzene				
		tert-Butylbenzene				
		Isobutylbenzene				
		sec-Butylbenzene				
		1-Methyl-3-isopropylbenzene				
		1-Methyl-4-isopropylbenzene				
		1-Methyl-2-isopropylbenzene				
		1-Methyl-3-n-propylbenzene				
		1-Methyl-4-n-propylbenzene				
		n-Butylbenzene				
		1,2-Diethylbenzene				
		1-Methyl-2-n-propylbenzene				
		1,4-Dimethyl-2-ethylbenzene				
		1,3-Dimethyl-5-ethylbenzene				
		1,2-Dimethyl-4-ethylbenzene				
		1,3-Dimethyl-2-ethylbenzene				
		1,2-Dimethyl-3-ethylbenzene				
		1,2,4,5-Tetramethylbenzene				
		2-Methylbutylbenzene				
		trans-1-Butyl-1-2-methylbenzene				
		n-Pentylbenzene				
		t-1-Butyl-1,3,5-dimethylbenzene				
t-1-butyl-ethylbenzene						
1,3,5-Triethylbenzene						
1,2,4-Triethylbenzene						
n-Hexylbenzene						

Product Number Reagecon	Mix Name	Constituents	Concentration	Matrix	Pack Size	ASTM
REPIANO-N	PIANO Naphthalenes	Cyclopentane	Varies per Batch	None	1ml	D6279
		Methylcyclopentane				D6733
		Cyclohexane				D5134
		1,1-Dimethylcyclopentane				D3710
		cis-1,3-Dimethylcyclopentane				D2789
		trans-1,2-Dimethylcyclopentane				
		trans-1,3-Dimethylcyclopentane				
		Methylcyclohexane				
		Ethylcyclopentane				
		ctc-1,2,3-Trimethylcyclopentane				
		cct-1,2,4-Trimethylcyclopentane				
		ctc-1,2,4-Trimethylcyclopentane				
		trans-1,4-Dimethylcyclohexane				
		1-Ethyl-1-methylcyclopentane				
		trans-1,2-Dimethylcyclohexane				
		ccc-1,2,3-Trimethylcyclopentane				
		Isopropylcyclopentane				
		cis-1,2-Dimethylcyclohexane				
		n-Propylcyclopentane				
		ccc-1,3,5-Trimethylcyclohexane				
		1,1,4-Trimethylcyclohexane				
		ctt-1,2,4-Trimethylcyclohexane				
		ctc-1,2,4-Trimethylcyclohexane				
		1,1,2-Trimethylcyclohexane				
		Isobutylcyclopentane				
		Isopropylcyclohexane				
		n-Butylcyclopentane				
		Isobutylcyclohexane				
		t-1-Methyl-2-propylcyclohexane				
		t-1-Methyl-2-(4MP)cyclopentane				

Product Number Reagecon	Mix Name	Constituents	Concentration	Matrix	Pack Size	ASTM
REPIANO-O	PIANO Olefins	3-Methyl-1-butene	Varies per Batch	None	1ml	D6279
		1-Pentene				D6733
		2-Methyl-1-butene				D5134
		2-Methyl-1, 3-butadiene				D3710
		trans-2-Pentene				D2789
		cis-2-Pentene				
		4-Methylpentene-1				
		1-Hexene				
		trans-2-Hexene				
		2-Methylpentene-2				
		cis-2-Hexene				
		1-Heptene				
		trans-3-Heptene				
		cis-3-Heptene				
		trans-2-Heptene				
		cis-2-Heptene				
		1-Octene				
		trans-2-Octene				
		cis-2-Octene				
		1-Nonene				
trans-3-Nonene						
cis-3-Nonene						
trans-2-Nonene						
cis-2-Nonene						
1-Decene						

Product Number Reagecon	Mix Name	Constituents	Concentration	Matrix	Pack Size	ASTM
REPIANO1	PIANO 1 Standard	n-Pentane	Varies per Batch	None	1ml	D6279
		n-Hexane				D6733
		n-Heptane				D5134
		n-Octane				D3710
		n-Nonane				D2789
		n-Decane				
		n-Undecane				
		n-Dodecane				
		Isopentane				
		2-Methyl Pentane				
		3-Methyl Pentane				
		2,2 Dimethylpentane				
		2,3 Dimethylpentane				
		2,4 Dimethylpentane				
		2,2,4 Trimethylpentane				
		Cylcohexane				
		Methylcyclohexane				
		Ethylcyclohexane				
		Propylcyclohexane				
		n-Butylcyclohexane				
		n-Pentylcyclohexane				
		Decalin				
		Benzene				
		Toluene				
		Propylbenzene				
		EthylBenzene				
		p-Xylene				
		Cumene				
		1,3,5-Trimethylbenzene				
		3-Ethyltoluene				
		1,2,4-Trimethylbenzene				
		1,2,4,5 Tetramethylbenzene				
		n-Butylbenzene				
		Iso-Butylbenzene				
		n-Pentylbenzene				
		1-Pentene				
		2,3,3 Trimethyl-1-Butene				
		2-Methyl-1-Heptene				
		1-Hexene				
		2,3-Dimethyl-2-Butene				
1-Heptene						
1-Nonene						
1-Decene						
1-Undecene						
1-Dodecene						

Product Number Reagecon	Mix Name	Constituents	Concentration	Matrix	Pack Size	ASTM
REPONA	PONA Standard	1-Butene	Varies per Batch	None	1ml	D6279
		1-Pentene				D6733
		1-Hexene				D5134
		1-Heptene				D3710
		1-Octene				D2789
		1-Nonene				D6298
		1-Decene				
		1-Undecene				
		1-Dodecene				
		N-Propane				
		N-Butane				
		N-Pentane				
		N-Hexane				
		N-Heptane				
		N-Octane				
		N-Nonane				
		N-Decane				
		N-Undecane				
		N-Dodecane				
		Methanol				
		Ethanol				
		tert- Butyl methyl ether				
		tert -Amyl methyl ether				
		tert –Butanol				
		tert– Butyl ethyl ether				
		Cyclopentane				
		Cyclohexane				
		Methylcyclohexane				
		Ethylcyclohexane				
		Propylcyclohexane				
		n-Butylcyclohexane				
		Benzene				
Toluene						
Ethylbenzene						
Propylbenzene						
N-Butylbenzene						
N-Pentylbenzene						