WADA & PCC funded Reference Materials Catalogue

NMI reference materials available globally through our international partners:

Cerilliant	LGC Standards	Merck
www.cerilliant.com	www.lgcstandards.com	www.sigmaaldrich.com

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	NMI reference	Unit of issue (mg)	Cost (A$)	
			Domestic (excl GST)	International
STEROIDS AND STEROID METABOLITE				
1-Androstendione				
1-Androstendione (5α-Androst-1-en-3,17-dione) *	D845	1	207	290
Danazol metabolites				
2α-Hydroxymethylethisterone †	D920b	1	110	154
Finasteride metabolites				
Carboxy finasteride †	S045	1	110	154
4-Hydroxy steroids				
4-Hydroxy-estr-4-en-3,17-dione †	S043	1 (ampoule)	110	154
17α-Methylclostebol metabolite				
4-Chloro-17α-methyl-androst-4-ene-3α, 17β-diol †	S044	1 (ampoule)	110	154
Methyldienolone				
Methyldienolone †	D916b	1 (ampoule)	110	154
7α-Methylnandrolone and metabolites				
7α-Methylnandrolone *	S048	1 (ampoule)	110	154
7α-Methyl-5β-estran-3α-ol-17-one (major metabolite) *	S047	1 (ampoule)	110	154
7α-Methyl-estr-4-ene-3α-ol-17-one (minor metabolite) *	S050	1 (ampoule)	110	154
Nandrolone metabolites				
19-Noretiocholanolone sulfate (Na salt)*	D849	1	110	154
Epinandrolone sulfate† TEA salt	D783b	5	110	154
Norbolethone and metabolites				
Norbolethone† (13β,17α-Diethyl-gonan-4-ene-17β-ol-3-one)	D825c	1 (ampoule)	110	110
13β,17α-Diethyl-5β-gonane-3α, 17β-diol (major metabolite) †	D818b	1 (ampoule)	110	154
13β,17α-Diethyl-5α-gonane-3α, 17β-diol (minor metabolite) †	D820b	1 (ampoule)	110	154
Testosterone metabolites (including internal standards)				
5β-Androstane-3α,17β-diol-3-β-glucuronic acid †	S003b	1	110	154
d4-5α-Androstan-3α,17β-diol-17-*O*-β-glucuronic acid *	S009	1	110	154
d4-5α-Androstan-3α,17β-diol-3-*O*-β-glucuronic acid *	S010	1	110	154
d3-5β-Androstan-3α,17β-diol-17-*O*-β-glucuronic acid *	S011	1	110	154
d5-5β-Androstan-3α,17β-diol-3-*O*-β-glucuronic acid *	S012	1	110	154
d4-Epitestosterone-17-*O*-β-glucuronic acid *	S023	1	110	154
d5-Etiocholanolone-3-*O*-β-glucuronide sodium salt *	S020	1	110	154
1-Testosterone*				
5α-Androst-1-ene-3α-ol-17-one* (Ampouled)	D832	0.2	110	154
Oral Turinabol metabolite				
6β-Hydroxy-oral turinabol †	D615b	1 (ampoule)	110	154

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Prohormones and metabolites				
3α,5-Cyclo-5α-androstan-6β-ol-17-one †	S039	1 (ampoule)	110	154
16α-Hydroxyandrosterone *	D843	1 (ampoule)	110	154
6β-Hydroxyetiocholanolone *	D867	1	110	154
4β-Hydroxy DHEA *	D834	1 (ampoule)	110	154
7-Keto DHEA *	D833	10	110	154
7α-Hydroxy DHEA *	D875	1	110	154
7β-Hydroxy DHEA *	D865b	1	110	154
16β-Hydroxy DHEA *	D844	1	110	154
3α-Hydroxy-4-estren-17-one *	D873	1	110	154
3β-Hydroxy-4-estren-17-one *	D866	1	110	154
Anti-inflammatory metabolites				
α-Hydroxycarprofen†	D1072	5	110	154
REV-ERB agonist SR9009 metabolites				
N-[(4-Chlorophenyl)methyl]-5-nitro-2-thiophenemethanamine hydrochloride†	D1066	1 (ampoule)	110	154
Ethyl *N*-(5-nitro-2-methylthiophene)-3-aminomethylpyrrolidine-1-carboxylate†	D1067	1 (ampoule)	110	154
Stimulants				
Formoterol fumarate†	D1065	25	110	154
Higenamine hydrochloride†	D1070	25	110	154
STEROIDS AND STEROID METABOLITES				
Steroid carbon isotope ratio standard mixture reference material for GCC-IRMS				
Carbon isotope delta value reported for 5α-androstan-3β-ol acetate ($\delta^{13}C_{VPDB}$ / ‰ -32.00 ± 0.09), 5α-androstan-3α-ol-17-one acetate ($\delta^{13}C_{VPDB}$ / ‰ -32.58 ± 0.03), 5β-androstan-3α-ol-11,17-dione acetate ($\delta^{13}C_{VPDB}$ / ‰ -16.50 ± 0.03), and 5α-cholestane ($\delta^{13}C_{VPDB}$ / ‰ -24.90 ± 0.05) †	CU-PCC 33-2	Ampoule	110	154
Carbon isotope delta value reported for 5β-androstan-3α-ol-17-one ($\delta^{13}C_{VPDB}$ / ‰ -28.75 ± 0.01), 5α-androstan-3α-ol-17-one ($\delta^{13}C_{VPDB}$ / ‰ -26.74 ± 0.03), 5β-pregnan-3α, 20α-diol ($\delta^{13}C_{VPDB}$ / ‰ -18.65 ± 0.03) †	CU-PCC 34-3	Ampoule	110	154
Carbon isotope delta value reported for 5α-androstan-3α-ol-17-one ($\delta^{13}C_{VPDB}$ / ‰ -27.09 ± 0.07) †	CU-PCC 40-1	Ampoule	110	154
Carbon isotope delta value reported for 5α-androstan-3α-ol-17-one acetate ($\delta^{13}C_{VPDB}$ / ‰ -32.82 ± 0.02) †	CU-PCC 41-1	Ampoule	110	154
Carbon isotope delta value reported for 5α-cholestane ($\delta^{13}C_{VPDB}$ / ‰ -25.03 ± 0.01) †	CU-PCC 42-1	Ampoule	110	154
Carbon isotope delta value reported for 5α-androstan-3α-ol-17-one acetate ($\delta^{13}C_{VPDB}$ / ‰ -32.73 ± 0.06), 5β-androstan-3α, 17β-diacetate ($\delta^{13}C_{VPDB}$ / ‰ -30.19 ± 0.07), 5α-cholestane ($\delta^{13}C_{VPDB}$ / ‰ -24.83 ± 0.13), and 5β- pregnan-3α, 20α-diacetate ($\delta^{13}C_{VPDB}$ / ‰ -21.16 ± 0.08) †	CU-PCC 44-1	Ampoule	110	154
Steroid Matrix Reference Material				

	NMI reference	Unit of issue (mg)	Cost (A$)	
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Mass fraction of 19-Norandrosterone (221.4 ng/g) in 1,2-dimethoxyethane (1 mL) *	MX003	Ampoule	165	242
Carbon Isotope Delta Value ($\delta^{13}C_{VPDB}$ / ‰) of 19-norandrosterone (-29.7 ± 0.8) in Water containing 20% Methanol 1 (mL)*	MX016	Ampoule	240	336
Mass fraction of testosterone metabolites in freeze dried human urine: 5α-androstane-3α-17β-diol (41.2 ± 1.8 ng/g), 5β-androstane-3α-17β-diol (66.0 ± 2.9 ng/g), androsterone 1652 ± 29 ng/g), etiocholanolone (1359 ± 36 ng/g), testosterone (88.1 ± 4.2 ng/g), epitestosterone (21.9 ± 1.0 ng/g), T/E mass ratio (4.03 ± 0.26)*	MX017i	Bottle	360	504
Carbon Isotope Delta Value ($\delta^{13}C_{VPDB}$ / ‰) in freeze dried human urine: 19-norandrosterone (–29.82 ± 0.41) *	MX017ii			
Carbon Isotope Delta Value ($\delta^{13}C_{VPDB}$ / ‰). Three ampoules containing dry steroid mixtures. The ampoules contain approximately 400 µg of each steroid with the exception of 16-androstenol supplied close to 280 µg. **Vial 1:** etiocholanolone (-27.94 ± 0.24), androsterone (-27.79 ± 0.21), 11-oxoetiocholanolone (-13.58 ± 0.23), testosterone (-27.87 ± 0.24), 11β-hydroxyetiocholanolone -29.51 ± 0.36) **Vial 2:** 5β-androstane-3α-17β-diol (-29.86 ± 0.16), 5α androstane-3α-17β-diol (-31.14 ± 0.24), pregnanediol (-16.79 ± 0.42), epitestosterone (-30.17 ± 0.36), 11β-hydroxyandrosterone (-28.59 ± 0.22) **Vial 3:** 16-androstenol (-30.96 ± 0.37), dehydroepiandrosterone (-31.63 ± 0.54), testosterone (-22.52 ± 0.33) †	MX018	3 Ampoules	240	336
Carbon Isotope Delta Value ($\delta^{13}C_{VPDB}$ / ‰): Boldenone (–30.38 ± 0.29) Boldenone* Metabolite 1 (–30.38 ± 0.29) *	MX020	Ampoule	240	336
Carbon Isotope Delta Value ($\delta^{13}C_{VPDB}$ / ‰): Formestane (–30.71 ± 0.48)*	MX021	Ampoule	240	336

*Production funded by the World Anti-Doping Agency.
†Production funded by the Partnership for Clean Competition.

NOTES

1. Restrictions on Issue

Production of these materials is funded by the World Anti-Doping Agency. These materials are only available to WADA accredited laboratories, or to laboratories which have entered the WADA accreditation process. Non-WADA-accredited laboratories who wish to purchase these materials must seek approval from WADA and provide evidence of the approval to NMI.

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2.1 NMI Reference Materials
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3. Ampouled Materials

For each ampouled reference material the product information sheet / certificate of analysis will state the mass of analyte dispensed into each ampoule. For reference materials with certified reference material status the mass of analyte will be reported with an associated uncertainty.

4. GST charges (Australian customers only)

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5. Delivery fee

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6. For further information

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