AUSTRALIAN PATHOLOGY UNITS AND TERMINOLOGY

(APUTS)

Harmonised Reference Intervals Chemical Pathology

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Australasian Reference Intervals

PITUS WG4 Outcomes

1. The PITUS working group supports publication of the harmonised reference intervals developed by AACB for both adults and children as a part of the set of RCPA APUTS documents
2. Any calculation of rounding for analytes must be performed before applying the age and reference interval
3. The number of days from birth to collection must be used for age calculations ie. Day 0 is the day of birth.
4. Age intervals may use a mixture of units where appropriate in a report or in a table. This must be restricted to days, weeks and years (not months) however.
5. Because common usage for analyte reference intervals has both the low and high values included while for age limits the higher value is not included, to avoid any confusion in interpretation of boundary conditions these need to be represented in different ways in reports and tables used outside the laboratory.
6. The same method for representing age intervals must be used for adults and children
7. There is as yet no international standard for representing age intervals and the committee proposes the format '1w to <12y' to show the time interval in a table or on a report. This was done to avoid confusion on reading and with the meaning of mathematical notation

   Example:

Analyte	Age	Reference	Interpretation of age (days)	Interpretation of reference (units)
Sodium	0w to <1w	(132–147) mmol/L	$0 \leq d \leq 6$	$132 \leq x \leq 147$ mmol/L
(LN-RCPA: 2951-2)	1w to <18y	(133–144) mmol/L	$7 \leq d \leq 6573$	$133 \leq x \leq 144$ mmol/L
	18y to <120y	(135–145) mmol/L	$6574 \leq d \leq 43829$	$135 \leq x \leq 145$ mmol/L

Where d = days from birth to collection.
And x = the analyte measured in the units and rounded to the reporting unit.

Assumptions used in calculations:
1 month = 4 weeks = 28 days
6 months = 26 weeks = 26w x 7 days = 182 days
Each year = 365.25 days (when calculating number of days always round down)

Definition of age units:
Days:
Day 0 (the 1st day of life) is day of birth
Day 1 (the 2nd day of life) is the day after the birth.
Days are calendar days, starting at midnight, rather than 24 hour periods starting at the time of birth.

Weeks:
Week 0 (the 1st week) is 7 day period starting on day of birth.

Week 1 (the 2nd week) is the week after week 0, ie starting at the beginning of day 7 (week zero comprises days 0,1,2,3,4,5,6).

Years:
Year 0 (the 1st year) is the 365 day period (with leap year adjustment, LYA) starting on day of birth. Also can be described as 52 week period counting from week 0 as described previously (ie from weeks 0 – 51 of life).
Year 1 (the 2nd year) is the year after year 0, ie starting at the beginning of day 366 (with LYA). Also can be described as starting at the start of week 52.

In this setting a baby is born in day 0, (day 0 of) week 0 and (day 0 and week 0 of) year 0.

Australasian Reference Intervals - Chemical Pathology*

*** AACB Committee for Common Reference Intervals and AACB Paediatric Biochemistry Special Interest Group**

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Document History:

Version	Reason for Change	Author	Date
1.0	Initial Australasian Reference Intervals. Prepared by the AACB Committee for Common Reference Intervals and AACB Paediatric Biochemistry Special Interest Group. To be published by the RCPA Pathology Information, Terminology and Units Standardisation (PITUS-14) Project.	Donna Moore	06-Jun-14
1.1	Fixed minor formatting issues.	Donna Moore	3-Nov-14

Australasian Reference Intervals - Chemical Pathology

Analyte	Age	Reference	Interpretation of age (days)	Interpretation of reference (units)
Sodium (LN-RCPA: 2951-2)	0d to <1w	(132–147) mmol/L	0 ≤ *d* ≤ 6	132 ≤ x ≤ 147 mmol/L
	1w to <18y	(133–144) mmol/L	7 ≤ *d* ≤ 6573	133 ≤ x ≤ 144 mmol/L
	18y to <120y	(135–145) mmol/L	6574 ≤ *d* ≤ 43829	135 ≤ x ≤ 145 mmol/L
Potassium (LN-RCPA: 2823-3) See note 1	0d to <1w	(3.8–6.5) mmol/L	0 ≤ *d* ≤ 6	3.8 ≤ x ≤ 6.5 mmol/L
	1w to <26w	(4.2–6.7) mmol/L	7 ≤ *d* ≤ 181	4.2 ≤ x ≤ 6.7 mmol/L
	26w to <2y	(3.9–5.6) mmol/L	182 ≤ *d* ≤ 729	3.9 ≤ x ≤ 5.6 mmol/L
	2y to <18y	(3.6–5.3) mmol/L	730 ≤ *d* ≤ 6573	3.6 ≤ x ≤ 5.3 mmol/L
	18y to <120y	(3.5–5.2) mmol/L	6574 ≤ *d* ≤ 43829	3.5 ≤ x ≤ 5.2 mmol/L
Chloride (LN-RCPA: 2075-0)	0d to <1w	(98–115) mmol/L	0 ≤ *d* ≤ 6	98 ≤ x ≤ 115 mmol/L
	1w to <18y	(97–110) mmol/L	7 ≤ *d* ≤ 6573	97 ≤ x ≤ 110 mmol/L
	18y to <120y	(95–110) mmol/L	6574 ≤ *d* ≤ 43829	95 ≤ x ≤ 110 mmol/L
Bicarbonate (LN-RCPA: 1963-8)	0d to <1w	(15–28) mmol/L	0 ≤ *d* ≤ 6	15 ≤ x ≤ 28 mmol/L
	1w to <2y	(16–29) mmol/L	7 ≤ *d* ≤ 729	16 ≤ x ≤ 29 mmol/L
	2y to <10y	(17–30) mmol/L	730 ≤ *d* ≤ 3651	17 ≤ x ≤ 30 mmol/L
	10y to <18y	(20–32) mmol/L	3652 ≤ *d* ≤ 6573	20 ≤ x ≤ 32 mmol/L
	18y to <120y	(22–32) mmol/L	6574 ≤ *d* ≤ 43829	22 ≤ x ≤ 32 mmol/L
Creatinine (LN-RCPA: 14682-9) See note 2 and 3	0d to <1w	(22–93) umol/L	0 ≤ *d* ≤ 6	22 ≤ x ≤ 93 umol/L
	1w to <4w	(17–50) umol/L	7 ≤ *d* ≤ 27	17 ≤ x ≤ 50 umol/L
	4w to <2y	(11–36) umol/L	28 ≤ *d* ≤ 729	11 ≤ x ≤ 36 umol/L
	2y to <6y	(20–44) umol/L	730 ≤ *d* ≤ 2190	20 ≤ x ≤ 44 umol/L
	6y to <12y	(27–58) umol/L	2191 ≤ *d* ≤ 4382	27 ≤ x ≤ 58 umol/L
	Male			
	12y to <15y	(35–83) umol/L	4383 ≤ *d* ≤ 5477	35 ≤ x ≤ 83 umol/L
	15y to <19y	(50–100) umol/L	5478 ≤ *d* ≤ 6938	50 ≤ x ≤ 100 umol/L
	19y to <60y	(60–110) umol/L	6939 ≤ *d* ≤ 21914	60 ≤ x ≤ 110 umol/L
	Female			
	12y to <15y	(35–74) umol/L	4383 ≤ *d* ≤ 5477	35 ≤ x ≤ 74 umol/L
	15y to <19y	(38–82) umol/L	5478 ≤ *d* ≤ 6938	38 ≤ x ≤ 82 umol/L
	19y to <60y	(45–90) umol/L	6939 ≤ *d* ≤ 21914	45 ≤ x ≤ 90 umol/L
Calcium (LN-RCPA: 2000-8)	0d to <1w	(1.85–2.80) mmol/L	0 ≤ *d* ≤ 6	1.85 ≤ x ≤ 2.80 mmol/L
	1w to <26w	(2.20–2.80) mmol/L	7 ≤ *d* ≤ 181	2.20 ≤ x ≤ 2.80 mmol/L
	26w to <2y	(2.20–2.70) mmol/L	182 ≤ *d* ≤ 729	2.20 ≤ x ≤ 2.70 mmol/L
	2y to <18y	(2.20–2.65) mmol/L	730 ≤ *d* ≤ 6573	2.20 ≤ x ≤ 2.65 mmol/L
	18y to <120y	(2.10–2.60) mmol/L	6574 ≤ *d* ≤ 43829	2.10 ≤ x ≤ 2.60 mmol/L
Calcium corrected for albumin (LN-RCPA: 29265-6)	18y to <120y	(2.10–2.60) mmol/L	6574 ≤ d ≤ 43829	2.10 ≤ x ≤ 2.60 mmol/L
Phosphate (LN-RCPA: 14879-1)	0d to <1w	(1.25–2.85) mmol/L	0 ≤ *d* ≤ 6	1.25 ≤ x ≤ 2.85 mmol/L
	1w to <4w	(1.50–2.75) mmol/L	7 ≤ *d* ≤ 27	1.50 ≤ x ≤ 2.75 mmol/L
	4w to <26w	(1.45–2.50) mmol/L	28 ≤ *d* ≤ 181	1.45 ≤ x ≤ 2.50 mmol/L
	26w to <1y	(1.30–2.30) mmol/L	182 ≤ *d* ≤ 364	1.30 ≤ x ≤ 2.30 mmol/L
	1y to <4y	(1.10–2.20) mmol/L	365 ≤ *d* ≤ 1460	1.10 ≤ x ≤ 2.20 mmol/L
	4y to <15y	(0.90–2.00) mmol/L	1461 ≤ *d* ≤ 5477	0.90 ≤ x ≤ 2.00 mmol/L
	15y to <18y	(0.80–1.85) mmol/L	5478 ≤ *d* ≤ 6573	0.80 ≤ x ≤ 1.85 mmol/L
	18y to <20y	(0.75–1.65) mmol/L	6574 ≤ *d* ≤ 7304	0.75 ≤ x ≤ 1.65 mmol/L
	20y to <120y	(0.75–1.50) mmol/L	7305 ≤ *d* ≤ 43829	0.75 ≤ x ≤ 1.50 mmol/L
Magnesium (LN-RCPA: 2601-3)	0d to <1w	(0.60–1.00) mmol/L	0 ≤ *d* ≤ 6	0.60 ≤ x ≤ 1.00 mmol/L
	1w to <18y	(0.65–1.10) mmol/L	7 ≤ *d* ≤ 6573	0.65 ≤ x ≤ 1.10 mmol/L
	18y to <120y	(0.70–1.10) mmol/L	6574 ≤ *d* ≤ 43829	0.70 ≤ x ≤ 1.10 mmol/L
Lactate dehydrogenase (LN-RCPA: 14804-9) See note 4	18y to <120y	(120–250) U/L	6574 ≤ d ≤ 43829	120 ≤ x ≤ 250 U/L
Alkaline phosphatase (LN-RCPA: 6768-6)	0d to <1w	(80–380) U/L	0 ≤ *d* ≤ 6	80 ≤ x ≤ 380 U/L
	1w to <4w	(120–550) U/L	7 ≤ *d* ≤ 27	120 ≤ x ≤ 550 U/L
	4w to <26w	(120–650) U/L	28 ≤ *d* ≤ 181	120 ≤ x ≤ 650 U/L
	26w to <2y	(120–450) U/L	182 ≤ *d* ≤ 729	120 ≤ x ≤ 450 U/L
	2y to <6y	(120–370) U/L	730 ≤ *d* ≤ 2190	120 ≤ x ≤ 370 U/L
	6y to <10y	(120–440) U/L	2191 ≤ *d* ≤ 3651	120 ≤ x ≤ 440 U/L
	Male			
	10y to <14y	(130–530) U/L	3652 ≤ *d* ≤ 5112	130 ≤ x ≤ 530 U/L
	14y to <15y	(105–480) U/L	5113 ≤ *d* ≤ 5477	105 ≤ x ≤ 480 U/L
	15y to <17y	(80 - 380) U/L	5478 ≤ *d* ≤ 6208	80 ≤ x ≤ 380 U/L
	17y to <19y	(50–220) U/L	6209 ≤ *d* ≤ 6938	50 ≤ x ≤ 220 U/L
	19y to <22y	(45–150) U/L	6939 ≤ *d* ≤ 8034	45 ≤ x ≤ 150 U/L
	22y to <120y	(30–110) U/L	8035 ≤ *d* ≤ 43829	30 ≤ x ≤ 110 U/L
	Female			
	10y to <13y	(100–460) U/L	3652 ≤ *d* ≤ 4747	100 ≤ x ≤ 460 U/L
	13y to <14y	(70–330) U/L	4748 ≤ *d* ≤ 5112	70 ≤ x ≤ 330 U/L
	14y to <15y	(50–280) U/L	5113 ≤ *d* ≤ 5477	50 ≤ x ≤ 280 U/L
	15y to <16y	(45–170) U/L	5478 ≤ *d* ≤ 5843	45 ≤ x ≤ 170 U/L
	16y to <22y	(35–140) U/L	5844 ≤ *d* ≤ 8034	35 ≤ x ≤ 140 U/L
	22y to <120y	(30–110) U/L	8035 ≤ *d* ≤ 43829	30 ≤ x ≤ 110 U/L
Total Protein (LN-RCPA: 2885-2)	18y to <120y	(60–80) g/L	6574 ≤ d ≤ 43829	60 ≤ x ≤ 80 g/L

Unless otherwise specified, the intervals are for serum or plasma for adults (18 years of age and older). The intervals are for use by laboratories using methods which are traceable to JCTLM-listed reference materials, methods and services (except bicarbonate where no references are listed).

LN-RCPA is the LOINC code from the RCPA dataset to be used for each analyte.

Note:

1. For reference intervals between 0w to <18y, the Potassium Reference Intervals listed in the table are for serum specimens only. Below are the Potassium Reference Intervals for when a plasma specimen is collected.

Potassium (Plasma)	0d to <1w	(3.5–6.2) mmol/L	$0 \leq d \leq 6$	$3.5 \leq x \leq 6.2$ mmol/L
	1w to <26w	(3.8–6.4) mmol/L	$7 \leq d \leq 181$	$3.8 \leq x \leq 6.4$ mmol/L
	26w to <2y	(3.5–5.4) mmol/L	$182 \leq d \leq 729$	$3.5 \leq x \leq 5.4$ mmol/L
	2y to <18y	(3.3–4.9) mmol/L	$730 \leq d \leq 6573$	$3.3 \leq x \leq 4.9$ mmol/L

For reference intervals from 18y to <120y, the Potassium Reference Intervals listed are for use for both serum and plasma. Laboratories testing only heparin plasma may choose to use a lower interval.

2. Creatinine RIs are by Vitros enzymatic assay

3. Creatinine has harmonised reference intervals for adults up to the age of 60 years. For older ages laboratories may elect to maintain these.

4. Lactate dehydrogenase [L to P] (IFCC), lactate to pyruvate method (IFCC method).

Australasian Adult Reference Intervals - Chemical Pathology

Analyte	Age	Reference	Interpretation of age (days)	Interpretation of reference (units)
Sodium (LN-RCPA: 2951-2)	18y to <120y	(135–145) mmol/L	6574 ≤ d ≤ 43829	135 ≤ x ≤ 145 mmol/L
Potassium (LN-RCPA: 2823-3) See note 1	18y to <120y	(3.5–5.2) mmol/L	6574 ≤ d ≤ 43829	3.5 ≤ x ≤ 5.2 mmol/L
Chloride (LN-RCPA: 2075-0)	18y to <120y	(95–110) mmol/L	6574 ≤ d ≤ 43829	95 ≤ x ≤ 110 mmol/L
Bicarbonate (LN-RCPA: 1963-8)	18y to <120y	(22–32) mmol/L	6574 ≤ d ≤ 43829	22 ≤ x ≤ 32 mmol/L
Creatinine (LN-RCPA: 14682-9) See note 2	**Male**			
	19y to <60y	(60–110) umol/L	6574 ≤ d ≤ 43829	60 ≤ x ≤ 110 umol/L
	Female			
	19y to <60y	(45–90) umol/L	6574 ≤ d ≤ 43829	45 ≤ x ≤ 90 umol/L
Calcium (LN-RCPA: 2000-8)	18y to <120y	(2.10–2.60) mmol/L	6574 ≤ d ≤ 43829	2.10 ≤ x ≤ 2.60 mmol/L
Calcium corrected for albumin (LN-RCPA: 29265-6)	18y to <120y	(2.10–2.60) mmol/L	6574 ≤ d ≤ 43829	2.10 ≤ x ≤ 2.60 mmol/L
Phosphate (LN-RCPA: 14879-1)	20y to <120y	(0.75–1.50) mmol/L	6574 ≤ d ≤ 43829	0.75 ≤ x ≤ 1.50 mmol/L
Magnesium (LN-RCPA: 2601-3)	18y to <120y	(0.70–1.10) mmol/L	6574 ≤ d ≤ 43829	0.70 ≤ x ≤ 1.10 mmol/L
Lactate dehydrogenase (LN-RCPA: 14804-9) See note 3	18y to <120y	(120–250) U/L	6574 ≤ d ≤ 43829	120 ≤ x ≤ 250 U/L
Alkaline phosphatase (LN-RCPA: 6768-6)	22y to <120y	(30–110) U/L	6574 ≤ d ≤ 43829	30 ≤ x ≤ 110 U/L
Total Protein (LN-RCPA: 2885-2)	18y to <120y	(60–80) g/L	6574 ≤ d ≤ 43829	60 ≤ x ≤ 80 g/L

Unless otherwise specified, the intervals are for serum or plasma for adults (18 years of age and older). The intervals are for use by laboratories using methods which are traceable to JCTLM-listed reference materials, methods and services (except bicarbonate where no references are listed).

LN-RCPA is the LOINC code from the RCPA dataset to be used for each analyte.

Note:

1. This range is proposed for use for both serum and plasma. Laboratories testing only heparin plasma may choose to use a lower interval.

2. Creatinine has harmonised reference intervals for adults up to the age of 60 years. For older ages laboratories may elect to maintain these.

3. Lactate dehydrogenase [L to P] (IFCC), lactate to pyruvate method (IFCC method).

Australasian Paediatric Reference Intervals - Chemical Pathology

Analyte	Age	Reference	Interpretation of age (days)	Interpretation of reference (units)
Sodium (LN-RCPA: 2951-2)	0d to <1w	(132–147) mmol/L	$0 \le d \le 6$	$132 \le x \le 147$ mmol/L
	1w to <18y	(133–144) mmol/L	$7 \le d \le 6573$	$133 \le x \le 144$ mmol/L
	18y to <120y	(135–145) mmol/L	$6574 \le d \le 43829$	$135 \le x \le 145$ mmol/L
Potassium (LN-RCPA: 2823-3) See note 1	0d to <1w	(3.8–6.5) mmol/L	$0 \le d \le 6$	$3.8 \le x \le 6.5$ mmol/L
	1w to <26w	(4.2–6.7) mmol/L	$7 \le d \le 181$	$4.2 \le x \le 6.7$ mmol/L
	26w to <2y	(3.9–5.6) mmol/L	$182 \le d \le 729$	$3.9 \le x \le 5.6$ mmol/L
	2y to <18y	(3.6–5.3) mmol/L	$730 \le d \le 6573$	$3.6 \le x \le 5.3$ mmol/L
	18y to <120y	(3.5–5.2) mmol/L	$6574 \le d \le 43829$	$3.5 \le x \le 5.2$ mmol/L
Chloride (LN-RCPA: 2075-0)	0d to <1w	(98–115) mmol/L	$0 \le d \le 6$	$98 \le x \le 115$ mmol/L
	1w to <18y	(97–110) mmol/L	$7 \le d \le 6573$	$97 \le x \le 110$ mmol/L
	18y to <120y	(95–110) mmol/L	$6574 \le d \le 43829$	$95 \le x \le 110$ mmol/L
Bicarbonate (LN-RCPA: 1963-8)	0d to <1w	(15–28) mmol/L	$0 \le d \le 6$	$15 \le x \le 28$ mmol/L
	1w to <2y	(16–29) mmol/L	$7 \le d \le 729$	$16 \le x \le 29$ mmol/L
	2y to <10y	(17–30) mmol/L	$730 \le d \le 3651$	$17 \le x \le 30$ mmol/L
	10y to <18y	(20–32) mmol/L	$3652 \le d \le 6573$	$20 \le x \le 32$ mmol/L
	18y to <120y	(22–32) mmol/L	$6574 \le d \le 43829$	$22 \le x \le 32$ mmol/L
Creatinine (LN-RCPA: 14682-9) See note 2 and 3	0d to <1w	(22–93) umol/L	$0 \le d \le 6$	$22 \le x \le 93$ umol/L
	1w to <4w	(17–50) umol/L	$7 \le d \le 27$	$17 \le x \le 50$ umol/L
	4w to <2y	(11–36) umol/L	$28 \le d \le 729$	$11 \le x \le 36$ umol/L
	2y to <6y	(20–44) umol/L	$730 \le d \le 2190$	$20 \le x \le 44$ umol/L
	6y to <12y	(27–58) umol/L	$2191 \le d \le 4382$	$27 \le x \le 58$ umol/L
	Male			
	12y to <15y	(35–83) umol/L	$4383 \le d \le 5477$	$35 \le x \le 83$ umol/L
	15y to <19y	(50–100) umol/L	$5478 \le d \le 6938$	$50 \le x \le 100$ umol/L
	19y to <60y	(60–110) umol/L	$6939 \le d \le 21914$	$60 \le x \le 110$ umol/L
	Female			
	12y to <15y	(35–74) umol/L	$4383 \le d \le 5477$	$35 \le x \le 74$ umol/L
	15y to <19y	(38–82) umol/L	$5478 \le d \le 6938$	$38 \le x \le 82$ umol/L
	19y to <60y	(45–90) umol/L	$6939 \le d \le 21914$	$45 \le x \le 90$ umol/L
Calcium (LN-RCPA: 2000-8)	0d to <1w	(1.85–2.80) mmol/L	$0 \le d \le 6$	$1.85 \le x \le 2.80$ mmol/L
	1w to <26w	(2.20–2.80) mmol/L	$7 \le d \le 181$	$2.20 \le x \le 2.80$ mmol/L
	26w to <2y	(2.20–2.70) mmol/L	$182 \le d \le 729$	$2.20 \le x \le 2.70$ mmol/L
	2y to <18y	(2.20–2.65) mmol/L	$730 \le d \le 6573$	$2.20 \le x \le 2.65$ mmol/L
	18y to <120y	(2.10–2.60) mmol/L	$6574 \le d \le 43829$	$2.10 \le x \le 2.60$ mmol/L
Phosphate (LN-RCPA: 14879-1)	0d to <1w	(1.25–2.85) mmol/L	$0 \le d \le 6$	$1.25 \le x \le 2.85$ mmol/L
	1w to <4w	(1.50–2.75) mmol/L	$7 \le d \le 27$	$1.50 \le x \le 2.75$ mmol/L
	4w to <26w	(1.45–2.50) mmol/L	$28 \le d \le 181$	$1.45 \le x \le 2.50$ mmol/L
	26w to <1y	(1.30–2.30) mmol/L	$182 \le d \le 364$	$1.30 \le x \le 2.30$ mmol/L
	1y to <4y	(1.10–2.20) mmol/L	$365 \le d \le 1460$	$1.10 \le x \le 2.20$ mmol/L
	4y to <15y	(0.90–2.00) mmol/L	$1461 \le d \le 5477$	$0.90 \le x \le 2.00$ mmol/L
	15y to <18y	(0.80–1.85) mmol/L	$5478 \le d \le 6573$	$0.80 \le x \le 1.85$ mmol/L
	18y to <20y	(0.75–1.65) mmol/L	$6574 \le d \le 7304$	$0.75 \le x \le 1.65$ mmol/L
	20y to <120y	(0.75–1.50) mmol/L	$7305 \le d \le 43829$	$0.75 \le x \le 1.50$ mmol/L
Magnesium (LN-RCPA: 2601-3)	0d to <1w	(0.60–1.00) mmol/L	$0 \le d \le 6$	$0.60 \le x \le 1.00$ mmol/L
	1w to <18y	(0.65–1.10) mmol/L	$7 \le d \le 6573$	$0.65 \le x \le 1.10$ mmol/L
	18y to <120y	(0.70–1.10) mmol/L	$6574 \le d \le 43829$	$0.70 \le x \le 1.10$ mmol/L
Alkaline phosphatase (LN-RCPA: 6768-6)	0d to <1w	(80–380) U/L	$0 \le d \le 6$	$80 \le x \le 380$ U/L
	1w to <4w	(120–550) U/L	$7 \le d \le 27$	$120 \le x \le 550$ U/L
	4w to <26w	(120–650) U/L	$28 \le d \le 181$	$120 \le x \le 650$ U/L
	26w to <2y	(120–450) U/L	$182 \le d \le 729$	$120 \le x \le 450$ U/L
	2y to <6y	(120–370) U/L	$730 \le d \le 2190$	$120 \le x \le 370$ U/L
	6y to <10y	(120–440) U/L	$2191 \le d \le 3651$	$120 \le x \le 440$ U/L
	Male			
	10y to <14y	(130–530) U/L	$3652 \le d \le 5112$	$130 \le x \le 530$ U/L
	14y to <15y	(105–480) U/L	$5113 \le d \le 5477$	$105 \le x \le 480$ U/L
	15y to <17y	(80 - 380) U/L	$5478 \le d \le 6208$	$80 \le x \le 380$ U/L
	17y to <19y	(50–220) U/L	$6209 \le d \le 6938$	$50 \le x \le 220$ U/L
	19y to <22y	(45–150) U/L	$6939 \le d \le 8034$	$45 \le x \le 150$ U/L
	22y to <120y	(30–110) U/L	$8035 \le d \le 43829$	$30 \le x \le 110$ U/L
	Female			
	10y to <13y	(100–460) U/L	$3652 \le d \le 4747$	$100 \le x \le 460$ U/L
	13y to <14y	(70–330) U/L	$4748 \le d \le 5112$	$70 \le x \le 330$ U/L
	14y to <15y	(50–280) U/L	$5113 \le d \le 5477$	$50 \le x \le 280$ U/L
	15y to <16y	(45–170) U/L	$5478 \le d \le 5843$	$45 \le x \le 170$ U/L
	16y to <22y	(35–140) U/L	$5844 \le d \le 8034$	$35 \le x \le 140$ U/L
	22y to <120y	(30–110) U/L	$8035 \le d \le 43829$	$30 \le x \le 110$ U/L

LN-RCPA is the LOINC code from the RCPA dataset to be used for each analyte.

Note:

1. Potassium Reference Intervals are for serum specimens. Below are the Potassium Reference Intervals for when a plasma specimen is collected.

Potassium (Plasma) See note 1	0d to <1w	(3.5–6.2) mmol/L	$0 \leq d \leq 6$	$3.5 \leq x \leq 6.2$ mmol/L
	1w to <26w	(3.8–6.4) mmol/L	$7 \leq d \leq 181$	$3.8 \leq x \leq 6.4$ mmol/L
	26w to <2y	(3.5–5.4) mmol/L	$182 \leq d \leq 730$	$3.5 \leq x \leq 5.4$ mmol/L
	2y to <18y	(3.3–4.9) mmol/L	$731 \leq d \leq 6574$	$3.3 \leq x \leq 4.9$ mmol/L

2. Reference intervals for patients <19y are specific for labs who use the Ortho Vitros Enzymatic creatinine assay.

3. Creatinine has harmonised reference intervals for patients up to the age 60 years. The reference intervals above this age are currently under review.