

**Results from the NIST Reference Measurement Procedure for the October 2012 to July 2017 25-hydroxyvitamin D EQA Samples**

Distribution	Sample No.	NIST 3-epi-25-OHD3 nmol/L	NIST 25-OHD2 nmol/L	NIST 25-OHD3 nmol/L	NIST 'Total' 25-OHD (25-OHD3 + 25-OHD2) nmol/L	DEQAS ALTM nmol/L	% Difference *
<b>October 2012</b>	<b>421</b>	2.3	1.0	57.5	58.5	55.4	-5.3
	<b>422</b>	1.7	1.7	36.6	38.2	36.2	-5.2
	<b>423</b>	5.7	1.0	84.6	85.6	81.2	-5.1
	<b>424</b>	2.6	1.0	46.2	47.2	47.0	-0.4
	<b>425</b>	2.5	1.0	46.2	47.1	46.9	-0.4
<b>January 2013</b>	<b>426</b>	0.4	1.1	33.4	34.5	32.0	-7.2
	<b>427</b>	4.5	0.9	75.2	76.1	72.5	-4.7
	<b>428</b>	2.8	2.5	52.3	54.8	51.8	-5.5
	<b>429</b>	3.0	0.6	58.9	59.5	58.5	-1.7
	<b>430 ***</b>	0.8	22.3	17.6	39.9	35.0	-12.3
<b>April 2013</b>	<b>431</b>	1.2	1.3	22.6	23.9	24.9	4.2
	<b>432</b>	2.9	2.7	48.6	51.3	50.0	-2.5
	<b>433</b>	11.7	1.2	90.4	91.6	88.2	-3.7
	<b>434 !</b>	2.4	4.4	74.2	78.6	67.2	-14.5
	<b>435</b>	2.4	0.5	46.1	46.6	45.8	-1.7
<b>July 2013</b>	<b>436</b>	4.0	1.3	76.7	78.0	83.2	6.7
	<b>437</b>	1.4	1.4	33.3	34.7	35.2	1.4
	<b>438</b>	2.7	1.8	54.8	56.6	57.3	1.2
	<b>439</b>	2.3	1.2	39.7	40.9	42.6	4.2
	<b>440</b>	2.3	1.3	47.1	48.4	51.3	6.0
<b>October 2013</b>	<b>441</b>	7.1	1.6	89.0	90.6	93.6	3.3
	<b>442</b>	4.6	1.6	73.8	75.4	82.3	9.2
	<b>443</b>	1.3	1.9	29.5	31.4	31.3	-0.3
	<b>444</b>	1.9	1.6	41.8	43.4	42.9	-1.2
	<b>445 ***</b>	1.4	14.8	39.3	54.1	49.3	-8.9
<b>January 2014</b>	<b>446</b>	5.7	0.9	91.8	92.6	96.7	4.4
	<b>447</b>	2.2	1.1	47.0	48.1	51.3	6.7
	<b>448</b>	1.3	1.8	30.7	32.5	32.7	0.6
	<b>449</b>	4.1	1.5	70.8	72.3	69.5	-3.9
	<b>450</b>	2.5	1.0	63.5	64.4	65.2	1.2

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<b>April 2014</b>	<b>451</b>	1.4	1.9	27.3	29.2	32.4	11.0
	<b>452</b>	7.8	1.1	99.0	100.1	114.9	14.8
	<b>453</b>	3.2	2.3	64.1	66.4	60.7	-8.6
	<b>454</b>	2.5	2.3	45.2	47.5	50.3	5.9
	<b>455</b>	na	1.4	50.9	52.3	55.5	6.1
<b>July 2014</b>	<b>456</b>	3.9	1.5	72.6	74.1	81.8	10.4
	<b>457</b>	1.4	2.0	39.0	41.0	42.0	2.4
	<b>458</b>	5.8	1.3	69.9	71.2	74.5	4.6
	<b>459</b>	4.8	0.9	92.5	93.4	99.4	6.4
	<b>460</b>	n/a	1.3	50.9	52.7	55.2	4.7
<b>October 2014</b>	<b>461</b>	2.7	2.1	55.0	57.1	56.6	-0.9
	<b>462</b>	4.5	1.2	80.0	81.2	80.1	-1.3
	<b>463</b>	5.6	0.7	85.7	86.4	91.9	6.4
	<b>464</b>	3.1	2.0	57.7	59.7	56.5	-5.4
	<b>465 **</b>	3.1	2.0	57.9	59.9	88.4	47.6
<b>January 2015</b>	<b>466</b>	3.1	1.0	63.4	64.4	66.1	2.6
	<b>467</b>	2.3	1.3	43.1	44.4	42.3	-4.7
	<b>468</b>	4.4	1.2	67.1	68.3	64.2	-6
	<b>469</b>	3.6	1.4	67.9	69.3	64.6	-6.8
	<b>470</b>	9.9	1.9	116.5	118.4	128.4	8.4
<b>April 2015</b>	<b>471 ***</b>	3.4	11.0	53.4	64.4	63.6	-1.2
	<b>472</b>	1.7	1.7	38.0	39.6	37.9	-4.4
	<b>473</b>	4.1	2.6	62.6	65.2	69.2	6.1
	<b>474</b>	5.5	1.3	77.4	78.6	82.6	5
	<b>475</b>	5.6	1.2	74.0	75.2	78.6	4.5
<b>July 2015</b>	<b>476</b>	5.4	0.7	100.4	101.1	99.7	-1.4
	<b>477</b>	1.8	1.8	43.5	45.3	42.8	-5.5
	<b>478</b>	2.5	1.2	73.5	74.6	74.1	-0.7
	<b>479</b>	1.0	1.4	30.9	32.3	30.8	-4.7
	<b>480 ***</b>	3.0	56.6	47.1	103.6	97.7	-5.7
<b>October 2015</b>	<b>481</b>	2.6	2.1	58.7	60.8	62.8	3.4
	<b>482</b>	1.8	0.8	34.8	35.6	34.5	-3.1
	<b>483</b>	5.2	0.8	115.4	116.2	118.6	2
	<b>484</b>	3.6	0.7	77.4	78.2	80.8	3.4
	<b>485 !</b>	1.8	1.1	47.1	48.2	44.2	-8.3
<b>January 2016</b>	<b>486</b>	2.3	0.5	28.3	28.7	30.6	6.5
	<b>487</b>	7.0	0.8	92.2	92.9	100.3	7.9
	<b>488</b>	4.8	1.2	65.6	66.8	69.0	3.3
	<b>489</b>	3.3	1.0	45.6	46.7	45.0	-3.4
	<b>490</b>	9.0	0.4	116.5	116.9	129.4	10.8

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<b>April 2016</b>	<b>491</b>	2.1	1.5	31.9	33.4	33.7	0.9
	<b>492</b>	3.1	1.1	50.5	51.6	53.4	3.5
	<b>493</b>	7.4	1.3	90.5	91.8	94.1	2.5
	<b>494</b>	3.7	1.1	70.8	71.9	68.7	-4.5
	<b>495***</b>	4.8	34.4	63.1	97.6	93.2	-4.5
<b>July 2016</b>	<b>496</b>	4.9	2.4	73.5	75.9	76.2	0.4
	<b>497</b>	3.6	1.4	48.6	50.0	54.1	8.2
	<b>498</b>	1.2	0.6	28.3	28.9	31.7	9.6
	<b>499</b>	3.4	1.4	49.8	51.2	54.2	5.9
	<b>500</b>	11.7	1.0	129.3	130.3	135.6	4.1
<b>October 2016</b>	<b>501</b>	6.5	2.8	93.4	96.2	100.4	4.4
	<b>502</b>	1.4	1.2	38.8	40.0	41.5	3.8
	<b>503</b>	5.5	1.4	79.5	80.6	87.1	8.1
	<b>504</b>	2.9	2.0	55.7	57.6	64.1	11.3
	<b>505</b>	0.9	0.7	21.0	21.7	23.5	8.3
<b>January 2017</b>	<b>506</b>	2.5	1.3	54.5	55.8	52.4	-6.1
	<b>507</b>	4.1	1.5	73.1	74.6	73.1	-2.1
	<b>508</b>	n/a	1.9	29.5	31.4	29.4	-6.4
	<b>509</b>	n/a	1.1	70.4	71.6	67.9	-5.1
	<b>510</b>	12.1	0.5	134.1	134.6	133.6	-0.8
<b>April 2017</b>	<b>511</b>	(4.3)	1.5	65.7	67.2	72.5	7.9
	<b>512</b>	(2.7)	1.9	44.9	46.8	49.9	6.6
	<b>513</b>	(6.8)	0.8	102.8	103.7	104.4	0.7
	<b>514</b>	(1.5)	0.6	27.1	27.7	29.6	6.9
	<b>515</b>	(3.0)	18.5	47.7	66.2	66.3	0.2
<b>July 2017</b>	<b>516</b>	2.9	1.3	45.2	46.5	47.3	1.7
	<b>517</b>	7.1	0.8	67.5	68.3	70.5	3.2
	<b>518</b>	8.7	1.2	103.7	105.0	110.3	5.0
	<b>519</b>	2.7	1.1	32.1	33.2	33.1	-0.3
	<b>520</b>	8.3	1.2	102.9	104.1	110.0	5.7

\* % Difference of the ALTM from the NIST RMP assigned value

\*\* Sample spiked with 24,25-dihydroxyvitamin D

\*\*\* Sample contained a mixture of endogenous 25-OHD2 and 25-OHD3

! Lipaemic sample

n/a Result not available due to presence of an unknown interferent not completely resolved from the 3-epi-25OH-D3 peak

( ) Use result with caution due to presence of an unknown interferent not completely resolved from the 3-epi-25OH-D3 peak