

Table 1: Results and z-Scores for Spinach Purée Test Material

laboratory number	analyte	
	nitrate assigned value 1707 mg/kg	
	result mg/kg	z-score
001	1672	-0.4
002	1664	-0.5
003	1550	-1.8
004	1723	0.2
005	1824	1.3
006	1736	0.3
007	1643	-0.7
008	1612	-1.1
009	1731	0.3
010	1768	0.7
011	1661	-0.5
012	1680	-0.3
013	1740.57	0.4
014	1700	-0.1
015	1678.3	-0.3
016	1496	<b>-2.4</b>
017	1600	-1.2
018	1560	-1.6
019	1812.9	1.2
020	1664	-0.5
021	1834	1.4
022	1820	1.3
023	1755	0.5
024	1630	-0.9
025	1515	<b>-2.2</b>

z-Scores outside the satisfactory range, i.e.  $|z| > 2$ , are shown in **bold**.  
 Results are as submitted by participants.

Table 1 (continued): Results and z-Scores for Spinach Purée Test Material

laboratory number	analyte	
	nitrate assigned value 1707 mg/kg	
	result mg/kg	z-score
026	1762	0.6
027	1700	-0.1
028	1257	<b>-5.0</b>
029	1804	1.1
030	1620	-1.0
031	1775	0.8
032	1707	0.0
033	1811	1.2
034	1608	-1.1
035	1667	-0.4
036	1600	-1.2
037	1707	0.0
038	1601	-1.2
039	1685	-0.2
040	1678.00	-0.3
041	1755	0.5
042	1680	-0.3
043	1933	<b>2.5</b>
044	1628	-0.9
045	1770	0.7
046	1720	0.1
047	1970	<b>3.0</b>
048	1620	-1.0
049	1685	-0.2
050	1846.20	1.6

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 Results are as submitted by participants.

Table 1 (continued): Results and z-Scores for Spinach Purée Test Material

laboratory number	analyte	
	nitrate assigned value 1707 mg/kg	
	result mg/kg	z-score
051	1691	-0.2
052	1768.40	0.7
053	1733	0.3
054	992	<b>-8.0</b>
055	1827	1.3
056	1520	<b>-2.1</b>
057	185.7	<b>-17.1</b>
058	1843	1.5
059	1715	0.1
060	1684	-0.3
061	1800	1.0
062	2611	<b>10.2</b>
063	1736	0.3
064	1825	1.3
065	1570	-1.5
066	1758	0.6
067	1751	0.5
068	1686	-0.2
069	1757	0.6
070	1860	1.7
071	1990	<b>3.2</b>
072	1720	0.1
073	1620	-1.0
074	1060	<b>-7.3</b>
075	1711	0.0
076	1778	0.8

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Table 1 (continued): Results and z-Scores for Spinach Purée Test Material

laboratory number	analyte	
	nitrate assigned value 1707 mg/kg	
	result mg/kg	z-score
077	1758	0.6
078	1700	-0.1
079	1736	0.3
080	1701	-0.1
081	1560	-1.6
082	1616	-1.0
083	1670	-0.4
084	1730	0.3
085	1580	-1.4
086	1751.2	0.5
087	1722	0.2
088	1618	-1.0
089	1550	-1.8
090	2019	<b>3.5</b>
091	1657	-0.6
092	1950	<b>2.7</b>
093*	2275.67	<b>6.4</b>
094	1624.78	-0.9
095	1814	1.2
096	1500	<b>-2.3</b>
097	2285.02	<b>6.5</b>
098	1675	-0.4
099	2191	<b>5.4</b>
100	1103	<b>-6.8</b>
101	690	<b>-11.4</b>
102	483	<b>-13.7</b>
103	1880	1.9
104	1889	2.0

z-Scores outside the satisfactory range, i.e.  $|z| > 2$ , are shown in **bold**.

Results are as submitted by participants.

\* = Participant comment: 'inhomogeneous material.'

Table 2: Assigned Value and Target Standard Deviation

analyte	assigned value, mg/kg			target standard deviation, mg/kg	
	data points, $n$	robust mean, $\hat{X}$	robust standard deviation, uncertainty, $\hat{\sigma}$ $u$	derived from	$\sigma_p$
nitrate	103	1707	123 12.1	Horwitz*	89.1

\* See page 6 for the appropriate form of the Horwitz equation.

Table 3: Number and Percentage of Satisfactory z-Scores

analyte	number of satisfactory scores, $ z  \leq 2$	total number of results	satisfactory, %
nitrate	84	104	81

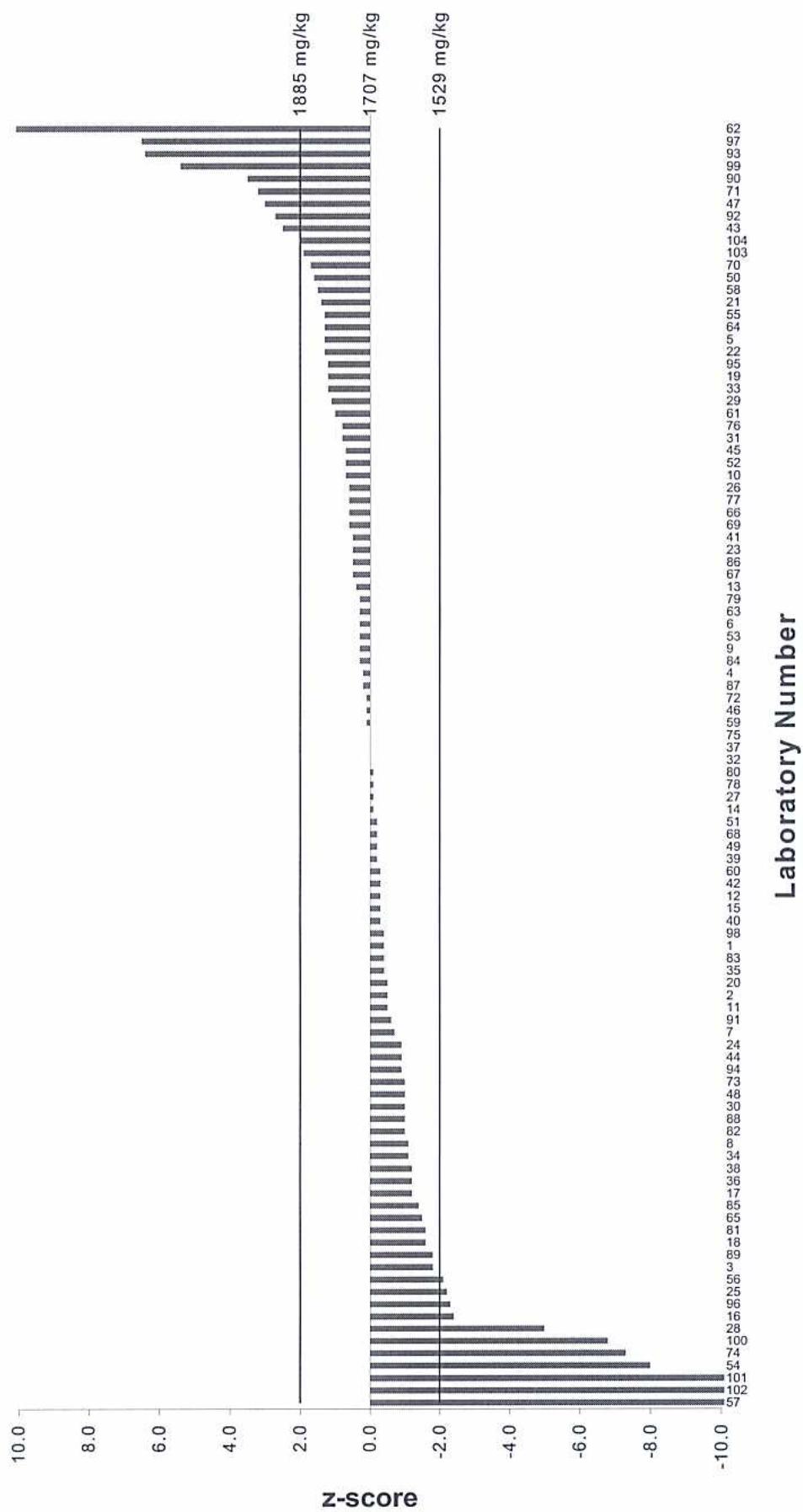


Figure 1: z-Scores for Nitrate (1707 mg/kg) in Spinach Purée Test Material

**APPENDIX I: Homogeneity Data for Spinach Purée Test Material**

sample identity	analyte	
	nitrate (mg/kg)	
	replicate 1	replicate 2
1	1567	1526
2	1623	1601
3	1509	1564
4	1478	1562
5	1624	1547
6	1541	1481
7	1604	1613
8	1518	1580
9	1593	1607
10	1554†	1759†
mean, <i>n</i>	1563	18
origin of target sd ( $\sigma_p$ )	Horwitz*	
absolute target sd ( $\sigma_p$ ) & as RSD%	82.7	5.29
$s_{an}$	37.9	
$s_{sam}^2$	789	
$\sigma_{all}^2$	615	
<i>critical</i>	2790	
$s_{sam}^2 < \text{critical?}$	<b>ACCEPT</b>	

\* See page 6 for the appropriate form of the Horwitz equation.

† = This data pair has been removed from calculations as a Cochran's outlier.