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CORRELATION AND STABILITY STUDY INTEGRITY PRODUCTS INC. URINE CUPS

Twenty-five random urine samples were chosen for the variety of drugs present in the samples. An aliquot of each sample was tested (Day 0) for all drugs, and then approximately half of the sample was poured into a corresponding Integrity Products Inc., cup ("green cups"), with the other half remaining in the original cup. All cups were stored on a single tray refrigerated (2-8 C) for the remainder of the study. Samples were analyzed twice a week (aliquots were removed from the cups, and discarded after testing) with Day 22 as the final day of testing.

Qualitatively there was essentially 100% agreement for all tests (two samples that tested borderline for THC using a 100ng/mL cutoff did not agree from Day 0 to Day 22. It is interesting to note that the sample that was borderline positive on Day 0 was borderline negative for both samples on Day 22, while the sample that was borderline negative on Day 0, was borderline positive for both on Day 22. This indicates that the variability in the results was probably due to day-to-day instrument variation rather than the sample cup. Both samples were clearly positive using the industry standard 50ng/mL THC cutoff.

Quantitative results for all tests were compiled and statistical correlations were performed on 25 matching pairs of samples. The results from the IPI green cups on Day 22 were compared to both the original results on Day 0, as well as to the results from the samples that remained in the original cups on Day 22. This was done to eliminate any questions about instrument bias, or cup bias for any given sample or day.

The calculations indicate very high correlation to both the variety of manufacturer's cups currently in use by Clinical Science Laboratory, as well as to the original results that were obtained on Day 0, testifying to the stability of the IPI green cups.

All testing was performed on Seimen's Advia 2400 chemistry analyzers. Microgenics DRI and Cedia Reagents were used as noted below.

Calculations were performed using STATA statistical software.

The following correlation coefficients were obtained:

Test Name	Reagent	Cutoff/units	Day 0 vs Day 22	Day 22 original vs green
Amphetamines	DRI	500 ng/mL	.9983	.9999
Amphetamines (syva)	Syva/Siemens	300 ng/mL	.9996	.9997
Barbiturates	DRI	300 ng/mL	.8611	.9043
Benzodiazepines	DRI	300 ng/mL	.9998	.9999
Buprenorphine*	Cedia	10 ng/mL	0.9986	0.9986
Cocaine Metabolite	DRI	150 ng/mL	.9999	.9999
Creatinine	DRI	mg/dL	.9997	.9999
Ethylglucuronide	DRI	1000	.9998	.9999
Ethyl Alcohol**	DRI	30 mg/dL	.8503	.8923
General Oxidant	DRI	100 IU/mL	.9910	.9994
6-Monoacetylmorphine	Cedia	10 ng/mL	.9470	.9154
MDMA (ecstasy)	Cedia	1000 ng/mL	.9996	.9998
Methadone	DRI	300 ng/mL	.9990	.9993
Methadone	DRI	100 ng/mL	.9991	.9991
Methadone Metabolite	Cedia	300 ng/mL	.9372	.9820
Methaqualone	DRI	300 ng/mL	.8508	.9623
Opiates	DRI	300 ng/mL	.9999	.9999
Oxycodone	DRI	100 ng/mL	1.0000	.9999
pH	DRI	N/A	.9921	.9978
Phencyclidine	DRI	25 ng/mL	.9993	.9996
Propoxyphene	DRI	300 ng/mL	.9402	.9813
Specific Gravity	DRI	N/A	.9919	.9941
THC	DRI	50 ng/mL	.9785	.9566
THC	DRI	100 ng/mL	.9642	.9668
Tricyclic Antidepress.	DRI	600 ng/mL	.9969	.9993

* Buprenorphine Comparisons: Day 0 vs Day15 Green, Day 15 Original vs Green

**Ethyl Alcohol Comparisons: Day 1 Green vs Day 22 Green, Day 22 Original vs Green

Calculations

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AMPHETAMINES - DRI

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	2688.56	3480.562	19	11284
greenday22	2856.32	3653.478	26	11457

```
      | day0be~e green~22
-----+-----
day0before | 1.0000
greenday22 | 0.9983 1.0000
```

```
. tab beforequal greenday22qual, row col chi2
```

```
+-----+
| Key          | <- key for all subsequent qualitative tables
|-----|
| frequency    |
| row percentage|
| column percentage|
+-----+
```

beforequal	greenday22qual		Total
	POS	neg	
POS	13	0	13
	100.00	0.00	100.00
	100.00	0.00	52.00
neg	0	12	12
	0.00	100.00	100.00
	0.00	100.00	48.00
Total	13	12	25
	52.00	48.00	100.00

| 100.00 100.00 | 100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	2868.28	3654.974	26	11472
greenday22	2856.32	3653.478	26	11457

	origi~22	green~22
original22	1.0000	
greenday22	0.9999	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalday22qual	greenday22qual		Total
	POS	neg	
POS	13	0	13
	100.00	0.00	100.00
	100.00	0.00	52.00
neg	0	12	12
	0.00	100.00	100.00
	0.00	100.00	48.00
Total	13	12	25
	52.00	48.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

AMPHETAMINES - SYVA

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	668.68	717.0116	22	2199
greenday22	655.4	706.3019	8	2131

	day0be~e	green~22
day0before	1.0000	
greenday22	0.9996	1.0000

```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22qual		Total
	POS	neg	
POS	13	0	13
	100.00	0.00	100.00
	100.00	0.00	52.00
neg	0	12	12
	0.00	100.00	100.00
	0.00	100.00	48.00
Total	13	12	25
	52.00	48.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	651.28	706.4721	11	2155
greenday22	655.4	706.3019	8	2131

	origi~22 green~22	
original22	1.0000	
greenday22	0.9997	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalda y22qual	greenday22qual		Total
	POS	neg	
POS	13	0	13
	100.00	0.00	100.00
	100.00	0.00	52.00
neg	0	12	12
	0.00	100.00	100.00
	0.00	100.00	48.00
Total	13	12	25
	52.00	48.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

BARBITURATES

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	7.08	4.091862	0	15
greenday22	3.84	4.190068	-3	14

	day0be~e	green~22
day0before	1.0000	
greenday22	0.8611	1.0000

```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22 qual		Total
	neg		
neg	25	25	25
	100.00	100.00	100.00
	100.00	100.00	100.00
Total	25	25	25
	100.00	100.00	100.00
	100.00	100.00	100.00

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	4.12	4.502962	-2	15
greenday22	3.84	4.190068	-3	14

	origi~22	green~22
original22	1.0000	
greenday22	0.9043	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalda y22qual	greenday22 qual		Total
	neg		
neg	25	25	25
	100.00	100.00	100.00
	100.00	100.00	100.00
Total	25	25	25
	100.00	100.00	100.00
	100.00	100.00	100.00

| 100.00 | 100.00

BENZODIAZEPINES

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	1008.28	1476.663	-9	3698
greenday22	1001.8	1471.038	-2	3667

	day0be~e	green~22
day0before	1.0000	
greenday22	0.9998	1.0000

```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22qual		Total
	POS	neg	
POS	9	0	9
	100.00	0.00	100.00
	100.00	0.00	36.00
neg	0	16	16
	0.00	100.00	100.00
	0.00	100.00	64.00
Total	9	16	25
	36.00	64.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	998.24	1469.213	-3	3645
greenday22	1001.8	1471.038	-2	3667

	origi~22	green~22
original22	1.0000	
greenday22	0.9999	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalday22qual	greenday22qual		Total
	POS	neg	
POS	8	0	8
	100.00	0.00	100.00
	88.89	0.00	32.00
neg	1	16	17
	5.88	94.12	100.00
	11.11	100.00	68.00
Total	9	16	25
	36.00	64.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 20.9150 Pr = 0.000

BUPRENORPHINE

Because the reagent boat emptied before all samples could be run for buprenorphine on day 22, the results from day 15 were used for the correlation studies.

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 15)
. correlate day0before greenday15, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	7.2796	19.45906	-.05	100.29
greenday15	5.5592	19.95511	-1.28	100.97

		day0before green~15	
day0before	1.0000		
greenday15	0.9986	1.0000	

```
. tab beforequal greenday15qual, row col chi2
```

beforequal	greenday15qual		Total
	POS	neg	
POS	1	0	1
	100.00	0.00	100.00
	100.00	0.00	4.00
neg	0	24	24
	0.00	100.00	100.00
	0.00	100.00	96.00
Total	1	24	25
	4.00	96.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

.

```
*ORIGINAL CUP (DAY 15) VS GREEN CUP (DAY 15)
. correlate original15 greenday15, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original15	5.6488	19.6079	-1.81	99.28
greenday15	5.5592	19.95511	-1.28	100.97

	origi~15	green~15
original15	1.0000	
greenday15	0.9986	1.0000

```
. tab originalday15qual greenday15qual, row col chi2
```

originalday15qual	greenday15qual		Total
	POS	neg	
POS	1	0	1
	100.00	0.00	100.00
	100.00	0.00	4.00
neg	0	24	24
	0.00	100.00	100.00
	0.00	100.00	96.00
Total	1	24	25
	4.00	96.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

COCAINE METABOLITE

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	282.64	593.1929	-13	1651
greenday22	285.84	600.0237	-10	1684

	day0be~e	green~22
day0before	1.0000	
greenday22	0.9999	1.0000

```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22qual		Total
	POS	neg	
POS	5	0	5
	100.00	0.00	100.00
	100.00	0.00	20.00
neg	0	20	20
	0.00	100.00	100.00
	0.00	100.00	80.00
Total	5	20	25
	20.00	80.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	290.12	606.3249	-10	1687
greenday22	285.84	600.0237	-10	1684

	origi~22	green~22
original22	1.0000	
greenday22	0.9999	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalda y22qual	greenday22qual		Total
	POS	neg	
POS	5	0	5
	100.00	0.00	100.00
	100.00	0.00	20.00
neg	0	20	20
	0.00	100.00	100.00
	0.00	100.00	80.00
Total	5	20	25
	20.00	80.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

CREATININE

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	118.292	69.15713	27.5	265.2
greenday22	115.276	67.35827	27	255.9

	day0be~e	green~22
day0before	1.0000	
greenday22	0.9997	1.0000

```
.
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	116.104	68.07509	27.4	260.2
greenday22	115.276	67.35827	27	255.9

	origi~22	green~22
original22	1.0000	
greenday22	0.9999	1.0000

ETHYL ALCOHOL

```
. *ORIGINAL RESULT (DAY 1) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day1before	1.052	.8746999	-.1	4.5
greenday22	1.152	.7188648	-.2	3

	day0be~e	green~22
day1before	1.0000	
greenday22	0.8503	1.0000

```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22		Total
	neg	qual	
neg	25	25	
	100.00	100.00	
	100.00	100.00	

Total	25	25
	100.00	100.00
	100.00	100.00

*ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)

. correlate original22 greenday22, means
(obs=25)

Variable	Mean	Std. Dev.	Min	Max
original22	1.104	.7265673	.1	3.4
greenday22	1.152	.7188648	-.2	3

	origi~22	green~22
original22	1.0000	
greenday22	0.8923	1.0000

. tab originalday22qual greenday22qual, row col chi2

originalday22qual	greenday22qual		Total
	neg		
neg	25		25
	100.00		100.00
	100.00		100.00
Total	25		25
	100.00		100.00
	100.00		100.00

ETHYLGLUCURONIDE

. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)

. correlate day0before greenday22, means
(obs=25)

Variable	Mean	Std. Dev.	Min	Max
day0before	280.54	921.5059	-15.1	4586.6
greenday22	307.912	969.5037	-13.8	4851.8

	day0be~e	green~22
day0before	1.0000	
greenday22	0.9998	1.0000

. tab beforequal greenday22qual, row col chi2

beforequal	greenday22qual		Total
	POS	neg	
POS	1	0	1
	100.00	0.00	100.00
	100.00	0.00	4.00
neg	0	24	24
	0.00	100.00	100.00
	0.00	100.00	96.00

Total	1	24	25
	4.00	96.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	308.036	981.2668	7.4	4908.9
greenday22	307.912	969.5037	-13.8	4851.8

	origi~22	green~22
original22	1.0000	
greenday22	0.9999	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalday22qual	greenday22qual		Total
	POS	neg	
POS	1	0	1
	100.00	0.00	100.00
	100.00	0.00	4.00
neg	0	24	24
	0.00	100.00	100.00
	0.00	100.00	96.00
Total	1	24	25
	4.00	96.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

GENERAL OXIDANT

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	.7200002	15.44134	-10.7	67.3
greenday22	-.92	11.90735	-11.2	48.2

	day0be~e	green~22
day0before	1.0000	
greenday22	0.9910	1.0000

```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22qual		Total
	neg	qual	
neg	25	0	25
	100.00	0.00	100.00

		100.00		100.00
<hr/>				
Total		25		25
		100.00		100.00
		100.00		100.00

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	-.932	11.95675	-11.1	48.4
greenday22	-.92	11.90735	-11.2	48.2

	origi~22	green~22
original22	1.0000	
greenday22	0.9994	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalday22qual	greenday22qual		Total
	neg		
neg	25		25
	100.00		100.00
	100.00		100.00
Total	25		25
	100.00		100.00
	100.00		100.00

6-MONOACETYLMORPHINE

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=24)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	-.8041667	.475924	-1.7	.2
greenday22	-.6833333	.5953929	-1.6	.8

	day0be~e	green~22
day0before	1.0000	
greenday22	0.9470	1.0000

```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22qual		Total
	neg		
neg	24		24
	100.00		100.00
	100.00		100.00

Total		24		24
		100.00		100.00
		100.00		100.00

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=24)
```

Variable	Mean	Std. Dev.	Min	Max
original22	-.725	.6208339	-1.7	.7
greenday22	-.6833333	.5953929	-1.6	.8

	origi~22	green~22
original22	1.0000	
greenday22	0.9151	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalday22qual	greenday22qual		Total
	neg		
neg	24		24
	100.00		100.00
	100.00		100.00
Total	24		24
	100.00		100.00
	100.00		100.00

MDMA (ECSTASY)

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=23)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	1163.087	1368.635	21	4335
greenday22	1184.522	1399.437	38	4429

	day0be~e	green~22
day0before	1.0000	
greenday22	0.9996	1.0000

```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22qual		Total
	POS	neg	
POS	13	0	13
	100.00	0.00	100.00
	100.00	0.00	52.00
neg	0	12	12
	0.00	100.00	100.00
	0.00	100.00	48.00

Total	13	12	25
	52.00	48.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

```
*ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	1244.28	1366.102	21	4414
greenday22	1253.24	1369.331	38	4429

	origi~22	green~22
original22	1.0000	
greenday22	0.9998	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalday22qual	greenday22qual		Total
	POS	neg	
POS	13	0	13
	100.00	0.00	100.00
	100.00	0.00	52.00
neg	0	12	12
	0.00	100.00	100.00
	0.00	100.00	48.00
Total	13	12	25
	52.00	48.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

METHADONE (300ng/mL cutoff)

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	1063.48	455.0932	-15	1480
greenday22	1114.48	478.2441	-16	1524

	day0be~e	green~22
day0before	1.0000	
greenday22	0.9990	1.0000


```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22qual		Total
	POS	neg	
POS	22	0	22
	100.00	0.00	100.00
	100.00	0.00	88.00
neg	0	3	3
	0.00	100.00	100.00
	0.00	100.00	12.00
Total	22	3	25
	88.00	12.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	1116.24	475.9927	-12	1524
greenday22	1114.48	478.2441	-16	1524

	origi~22 green~22	
original22	1.0000	
greenday22	0.9993	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalda y22qual	greenday22qual		Total
	POS	neg	
POS	22	0	22
	100.00	0.00	100.00
	100.00	0.00	88.00
neg	0	3	3
	0.00	100.00	100.00
	0.00	100.00	12.00
Total	22	3	25
	88.00	12.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

METHADONE (100ng/mL CUTOFF)

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	1093.28	472.4307	-18	1535
greenday22	1128.44	485.132	-14	1549

	day0be~e	green~22
day0before	1.0000	
greenday22	0.9991	1.0000

```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22qual		Total
	POS	neg	
POS	23	0	23
	100.00	0.00	100.00
	100.00	0.00	92.00
neg	0	2	2
	0.00	100.00	100.00
	0.00	100.00	8.00
Total	23	2	25
	92.00	8.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	1127.24	482.6324	-11	1543
greenday22	1128.44	485.132	-14	1549

	origi~22	green~22
original22	1.0000	
greenday22	0.9991	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalday22qual	greenday22qual		Total
	POS	neg	
POS	23	0	23
	100.00	0.00	100.00
	100.00	0.00	92.00
neg	0	2	2
	0.00	100.00	100.00
	0.00	100.00	8.00
Total	23	2	25
	92.00	8.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

METHAQUALONE

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	-3.08	10.91986	-26	15
greenday22	2.68	13.85556	-16	50

	day0before	greenday22
day0before	1.0000	
greenday22	0.8508	1.0000

```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22qual		Total
	neg		
neg	25		25
	100.00		100.00
	100.00		100.00
Total	25		25
	100.00		100.00
	100.00		100.00

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	1.72	16.2955	-20	62
greenday22	2.68	13.85556	-16	50

	origi~22	green~22
original22	1.0000	
greenday22	0.9623	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalday22qual	greenday22qual		Total
	neg	pos	
neg	25	0	25
	100.00	0.00	100.00
	100.00	0.00	100.00
Total	25	0	25
	100.00	0.00	100.00
	100.00	0.00	100.00

OPIATES

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	184.28	445.1101	-22	1696
greenday22	194.48	464.5141	-17	1771

	day0before	greenday22
day0before	1.0000	0.9999
greenday22	0.9999	1.0000

```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22qual		Total
	POS	neg	
POS	4	0	4
	100.00	0.00	100.00
	100.00	0.00	16.00
neg	0	21	21
	0.00	100.00	100.00
	0.00	100.00	84.00
Total	4	21	25
	16.00	84.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	194.16	465.1943	-17	1787

```
greenday22 |      194.48      464.5141      -17      1771
```

```

      | origi~22 green~22
-----+-----
original22 | 1.0000
greenday22 | 0.9999 1.0000

```

```
. tab originalday22qual greenday22qual, row col chi2
```

```

originalda |      greenday22qual
y22qual   |      POS      neg |      Total
-----+-----+-----
      POS |      4      0 |      4
      |     100.00    0.00 |     100.00
      |     100.00    0.00 |     16.00
-----+-----+-----
      neg |      0     21 |     21
      |      0.00   100.00 |     100.00
      |      0.00   100.00 |     84.00
-----+-----+-----
      Total |      4     21 |     25
      |     16.00    84.00 |     100.00
      |     100.00   100.00 |     100.00

```

```
Pearson chi2(1) = 25.0000 Pr = 0.000
```

pH

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

```

Variable |      Mean      Std. Dev.      Min      Max
-----+-----+-----+-----+-----
day0before |      6.66      .9861542      5.1      8.8
greenday22 |      6.9      1.127313      5.1      9.1

```

```

      | day0be~e green~22
-----+-----
day0before | 1.0000
greenday22 | 0.9921 1.0000

```

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

```

Variable |      Mean      Std. Dev.      Min      Max
-----+-----+-----+-----+-----
original22 |      6.908      1.110526      5.1      9.1
greenday22 |      6.9      1.127313      5.1      9.1

```

```

      | origi~22 green~22
-----+-----
original22 | 1.0000
greenday22 | 0.9978 1.0000

```

PHENCYCLIDINE

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	3.92	18.28916	-2	91
greenday22	4.2	19.2765	-3	96

```

| day0be~e green~22
-----+-----
day0before | 1.0000
greenday22 | 0.9993 1.0000
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22qual		Total
	POS	neg	
POS	1	0	1
	100.00	0.00	100.00
	100.00	0.00	4.00
neg	0	24	24
	0.00	100.00	100.00
	0.00	100.00	96.00
Total	1	24	25
	4.00	96.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	4.28	19.2733	-2	96
greenday22	4.2	19.2765	-3	96

```

| origi~22 green~22
-----+-----
original22 | 1.0000
greenday22 | 0.9996 1.0000
. tab originalday22qual greenday22qual, row col chi2
```

originalda y22qual	greenday22qual		Total
	POS	neg	
POS	1	0	1
	100.00	0.00	100.00
	100.00	0.00	4.00
neg	0	24	24

		0.00	100.00		100.00
		0.00	100.00		96.00
-----+-----+-----					
Total		1	24		25
		4.00	96.00		100.00
		100.00	100.00		100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

PROPOXYPHENE

```
. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
. correlate day0before greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
day0before	-16.52	8.226583	-37	-3
greenday22	-13.12	8.115417	-37	-3

```
-----+-----
| day0be~e green~22
-----+-----
day0before | 1.0000
greenday22 | 0.9402 1.0000
```

```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22 qual		Total
	neg		
neg	25		25
	100.00		100.00
	100.00		100.00
Total	25		25
	100.00		100.00
	100.00		100.00

```
. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	-12.48	8.860587	-39	-1
greenday22	-13.12	8.115417	-37	-3

```
-----+-----
| origi~22 green~22
-----+-----
original22 | 1.0000
greenday22 | 0.9813 1.0000
```

```
. tab originalday22qual greenday22qual, row col chi2
```

originalda y22qual	greenday22 qual		Total
	neg		
neg	25		25
	100.00		100.00
	100.00		100.00
Total	25		25
	100.00		100.00
	100.00		100.00

SPECIFIC GRAVITY

. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
 . correlate day0before greenday22, means
 (obs=25)

Variable	Mean	Std. Dev.	Min	Max
day0before	1.01676	.0051743	1.007	1.023
greenday22	1.01604	.0053032	1.007	1.023
day0be~e green~22				
day0before	1.0000			
greenday22	0.9919	1.0000		

. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
 . correlate original22 greenday22, means
 (obs=25)

Variable	Mean	Std. Dev.	Min	Max
original22	1.01604	.005216	1.007	1.023
greenday22	1.01604	.0053032	1.007	1.023
origi~22 green~22				
original22	1.0000			
greenday22	0.9941	1.0000		

THC (50ng/mL cutoff)

. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
 . correlate day0before greenday22, means
 (obs=25)

Variable	Mean	Std. Dev.	Min	Max
day0before	54.24	53.89595	-10	142
greenday22	55.88	53.95702	-8	140
day0be~e green~22				
day0before	1.0000			
greenday22	0.9785	1.0000		

. tab beforequal greenday22qual, row col chi2

beforequal	greenday22qual		Total
	POS	neg	
POS	14	0	14
	100.00	0.00	100.00
	100.00	0.00	56.00
neg	0	11	11
	0.00	100.00	100.00

	0.00	100.00	44.00
Total	14	11	25
	56.00	44.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000
 . *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
 . correlate original22 greenday22, means
 (obs=25)

Variable	Mean	Std. Dev.	Min	Max
original22	60.48	64.61754	-9	216
greenday22	55.88	53.95702	-8	140

	origi~22	green~22
original22	1.0000	
greenday22	0.9566	1.0000

. tab originalday22qual greenday22qual, row col chi2

originalday22qual	greenday22qual		Total
	POS	neg	
POS	14	0	14
	100.00	0.00	100.00
	100.00	0.00	56.00
neg	0	11	11
	0.00	100.00	100.00
	0.00	100.00	44.00
Total	14	11	25
	56.00	44.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

THC (100ng/mL cutoff)

. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
 . correlate day0before greenday22, means
 (obs=25)

Variable	Mean	Std. Dev.	Min	Max
day0before	55.36	55.777	-9	174
greenday22	58.24	61.64433	-9	247

	day0be~e	green~22
day0before	1.0000	
greenday22	0.9642	1.0000


```
. tab beforequal greenday22qual, row col chi2
```

beforequal	greenday22qual		Total
	POS	neg	
POS	2	1	3
	66.67	33.33	100.00
	66.67	4.55	12.00
neg	1	21	22
	4.55	95.45	100.00
	33.33	95.45	88.00
Total	3	22	25
	12.00	88.00	100.00
	100.00	100.00	100.00

```
Pearson chi2(1) = 9.6476 Pr = 0.002
```

```
. list if beforequal!= greenday22qual (if day0 result is not equal to day22 result)
```

	sample	day0be~e	origi~22	green~22	before~1	origin~1	greend~1
2.	2	98	114	100	neg	POS	POS
23.	23	100	95	98	POS	neg	neg

The anomalous results were both borderline samples at the 100ng/mL cutoff. At the industry standard 50ng/mL cutoff, both samples would be clear positives. As the results obtained from both the original cup and the green cup were qualitatively the same on day 22, this can be attributed to day-to-day variation in the instrument, and not to the the sample cups.

```
*ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
```

```
. correlate original22 greenday22, means
(obs=25)
```

Variable	Mean	Std. Dev.	Min	Max
original22	57.16	58.10815	-8	188
greenday22	58.24	61.64433	-9	247

	origi~22	green~22
original22	1.0000	
greenday22	0.9668	1.0000

```
. tab originalday22qual greenday22qual, row col chi2
```

originalda y22qual	greenday22qual		Total
	POS	neg	
POS	3	0	3
	100.00	0.00	100.00
	100.00	0.00	12.00
neg	0	22	22
	0.00	100.00	100.00

	0.00	100.00	88.00
Total	3	22	25
	12.00	88.00	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 25.0000 Pr = 0.000

TRICYCLIC ANTIDEPRESSANT

. *ORIGINAL RESULT (DAY 0) VS GREEN CUP (DAY 22)
 . correlate day0before greenday22, means
 (obs=25)

Variable	Mean	Std. Dev.	Min	Max
day0before	120.88	132.5803	5	384
greenday22	115.08	125.5478	12	382

	day0be~e	green~22
day0before	1.0000	
greenday22	0.9969	1.0000

. tab beforequal greenday22qual, row col chi2

	greenday22	
beforequal	qual	Total
neg	25	25
	100.00	100.00
	100.00	100.00
Total	25	25
	100.00	100.00
	100.00	100.00

. *ORIGINAL CUP (DAY 22) VS GREEN CUP (DAY 22)
 . correlate original22 greenday22, means
 (obs=25)

Variable	Mean	Std. Dev.	Min	Max
original22	115.88	125.5638	14	380
greenday22	115.08	125.5478	12	382

	origi~22	green~22
original22	1.0000	
greenday22	0.9993	1.0000

. tab originalday22qual greenday22qual, row col chi2

	greenday22
originalda	qual

y22qual	neg	Total
neg	25	25
	100.00	100.00
	100.00	100.00
Total	25	25
	100.00	100.00
	100.00	100.00

Sample accession number key

CSL Accession Number	Number assigned to "original" cup after sample split	Number assigned to "green" cup after sample split
264061	1061	2061
263075	1075	2075
264109	1109	2109
267124	1124	2124
263165	1165	2165
263300	1300	2300
265421	1421	2421
263442	1442	2442
267452	1452	2452
265600	1600	2600
265635	1635	2635
264664	1664	2664
267729	1729	2729
262733	1733	2733
267740	1740	2740
262752	1752	2752
263768	1768	2768
263781	1781	2781
262858	1858	2858
267887	1887	2887
263894	1894	2894
263905	1905	2905
264977	1977	2977
272985	1985	2985
262995	1995	2995

Tables of all raw data obtained during the study are attached.