

## Zygoty Certificate

The DNA profiles of Sample Donor 1 and Sample Donor 2, comprising the alleles observed at the DNA markers listed below, were compared to determine whether they share an identical DNA profile (monozygoty siblings) or not.

**Case Ref:**

ZYG001

### DNA Profiles Obtained

DNA Marker	Sample Donor 1		Sample Donor 2		LR
DNA Marker 1	15	15	15	15	2.50
DNA Marker 2	14	16	14	16	2.94
DNA Marker 3	9	10	9	10	3.41
DNA Marker 4	11	12	11	12	2.27
DNA Marker 5	8	8	8	8	1.79
DNA Marker 6	2	---	2	---	-----
DNA Marker 7	X	Y	X	Y	-----
DNA Marker 8	12	13	12	13	2.60
DNA Marker 9	28	31	28	31	3.19
DNA Marker 10	12	15	12	15	2.91
DNA Marker 11	7	12	7	12	2.92
DNA Marker 12	14	14	14	14	3.00
DNA Marker 13	14	15	14	15	2.46
DNA Marker 14	7	9.3	7	9.3	2.41
DNA Marker 15	24	26	24	26	3.45
DNA Marker 16	11	16	11	16	2.45
DNA Marker 17	11	11	11	11	2.28
DNA Marker 18	11	14	11	14	2.25
DNA Marker 19	7	12	7	12	3.42
DNA Marker 20	12	14	12	14	3.03
DNA Marker 21	12	15	12	15	3.23
DNA Marker 22	13	16	13	16	3.25
DNA Marker 23	18	19	18	19	-----
DNA Marker 24	20	23	20	23	3.10
DNA Marker 25	11	11	11	11	2.80

Probability of Monozygoty

99.99%

Combined Likelihood Ratio (CLR)

5,212,279,166.90

### Conclusion

The results obtained indicate that Sample Donor 1 and Sample Donor 2, share an identical DNA profile (monozygoty siblings). It is 5212279166.9 times more likely that the tested individuals are identical rather than non-identical siblings that share a DNA profile due to random chance. The probability of monozygoty is greater than 99.99%.

**Signed:** A. Biolabs

**Position:** Reporting Scientist