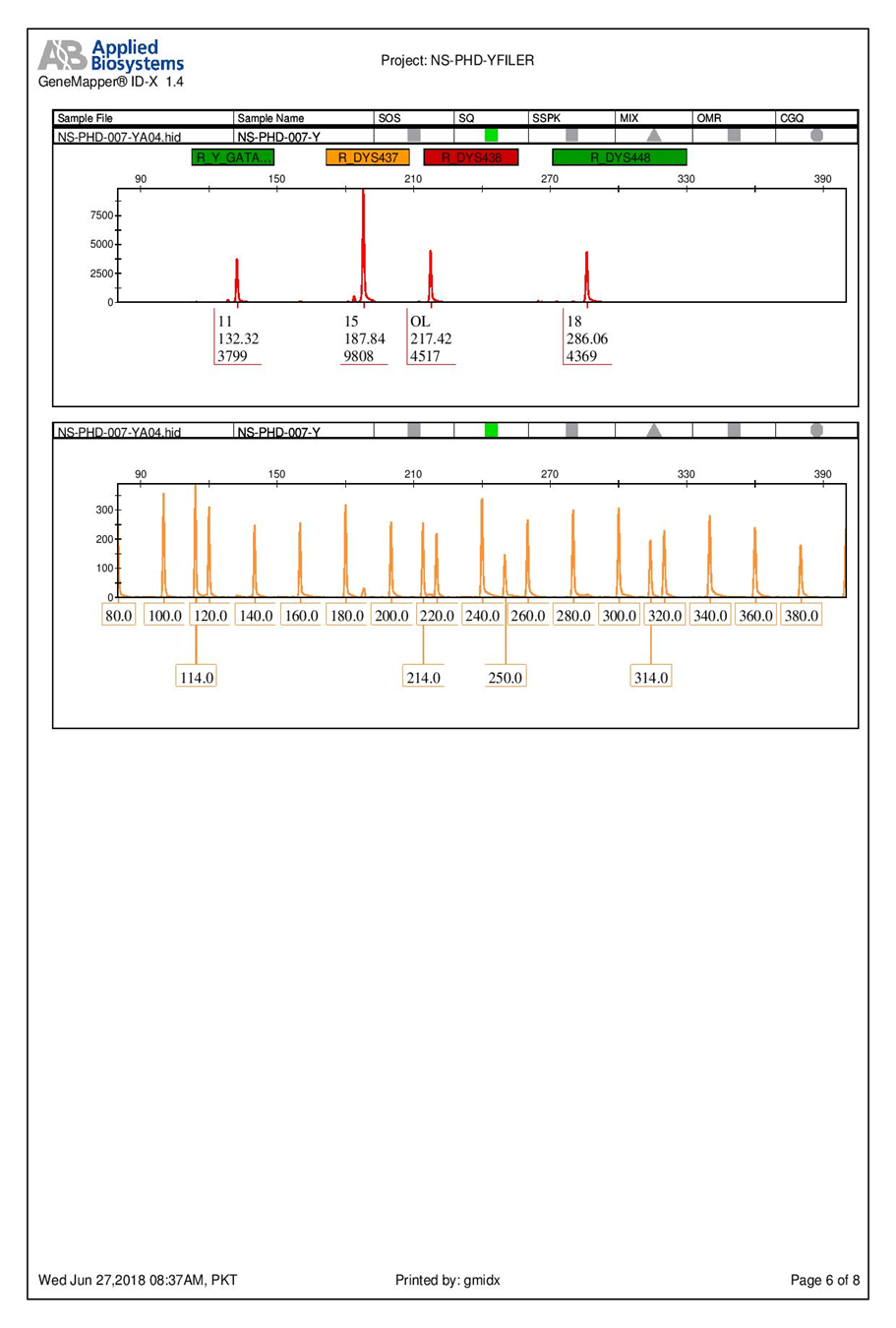
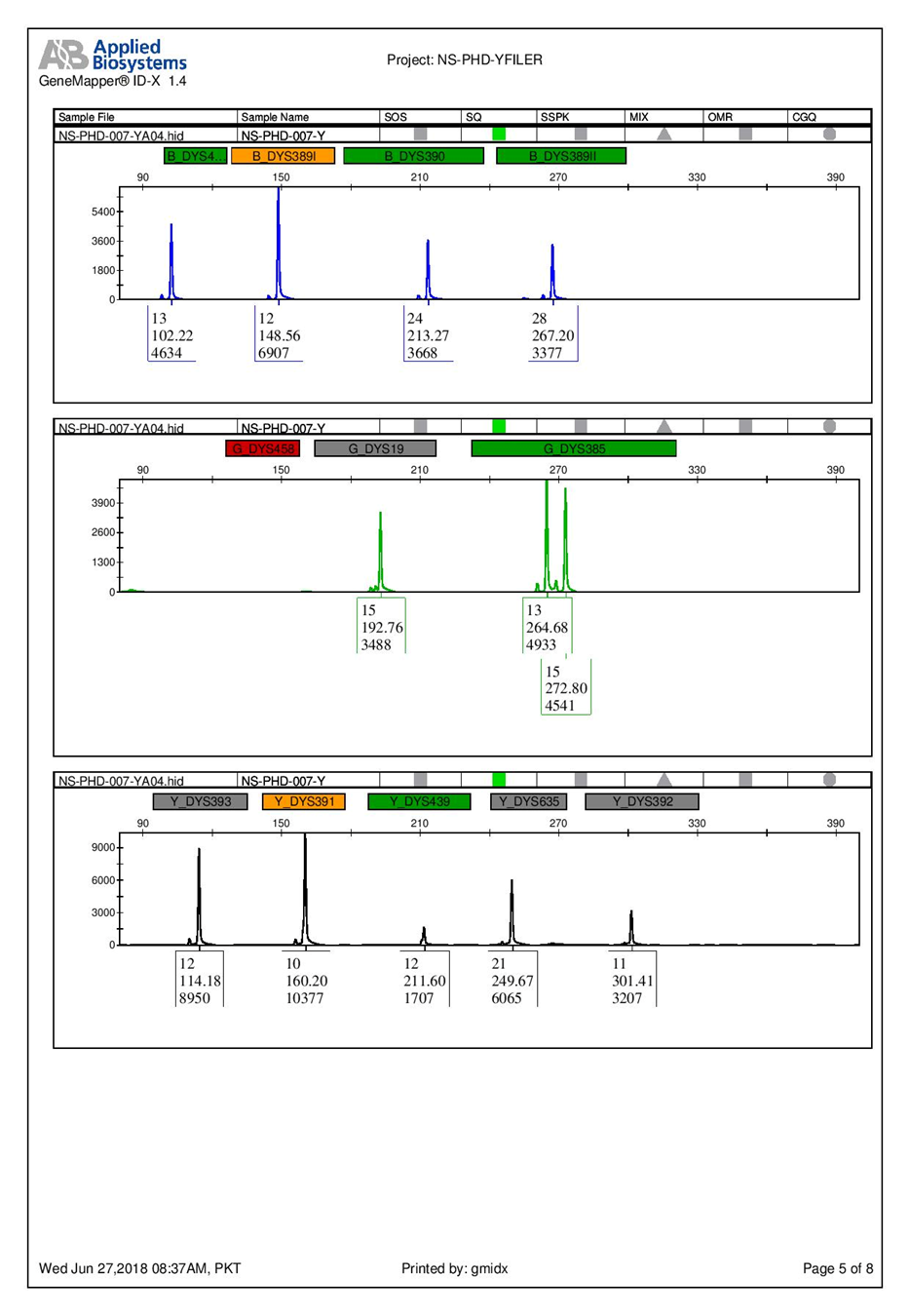
**Supplementary Material**

Figure S1: Electropherograms of AMEL-Y null male with off ladder allele variant 7 at DYD438 (SQ 7, 14, 16 and 17).

****

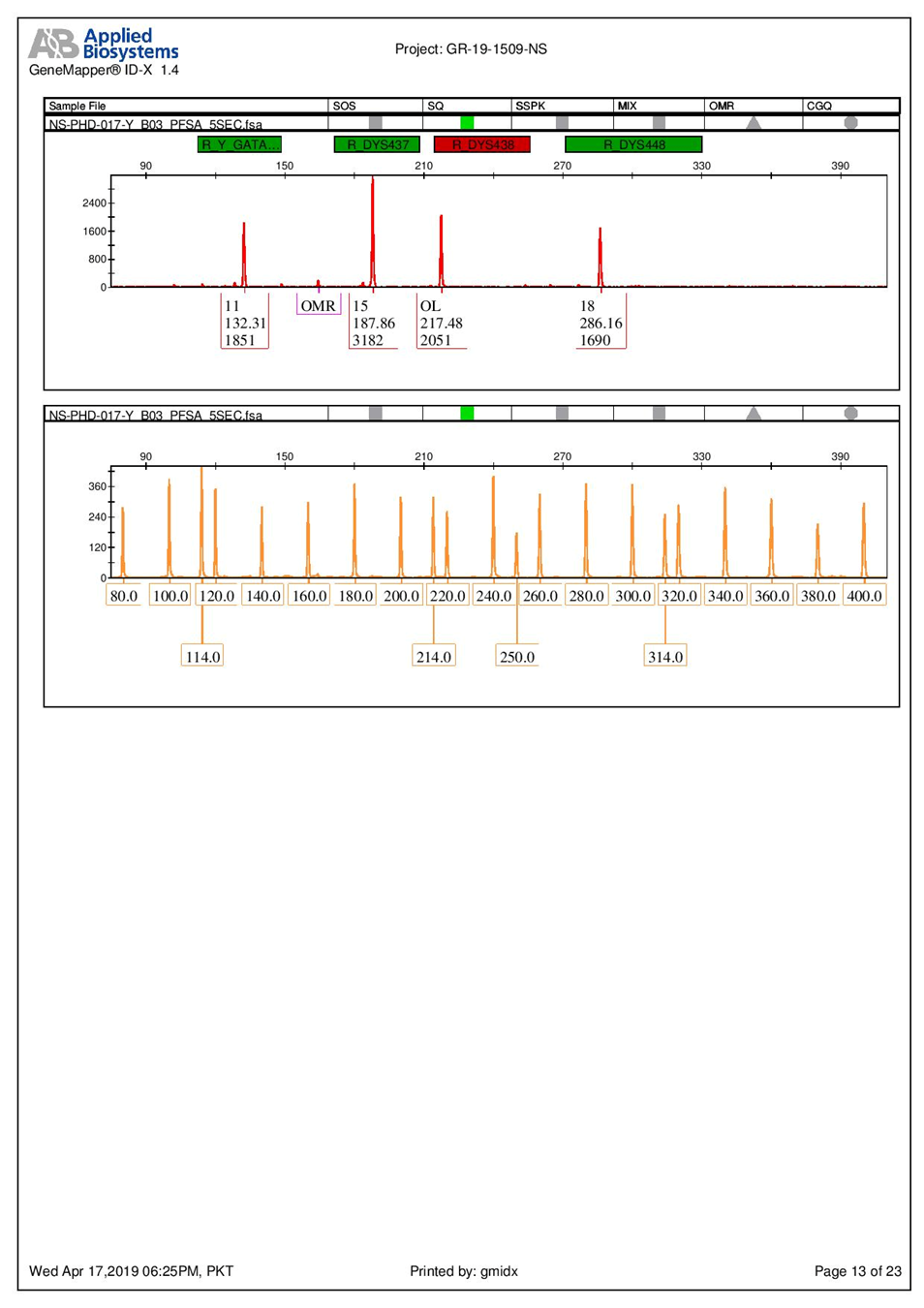
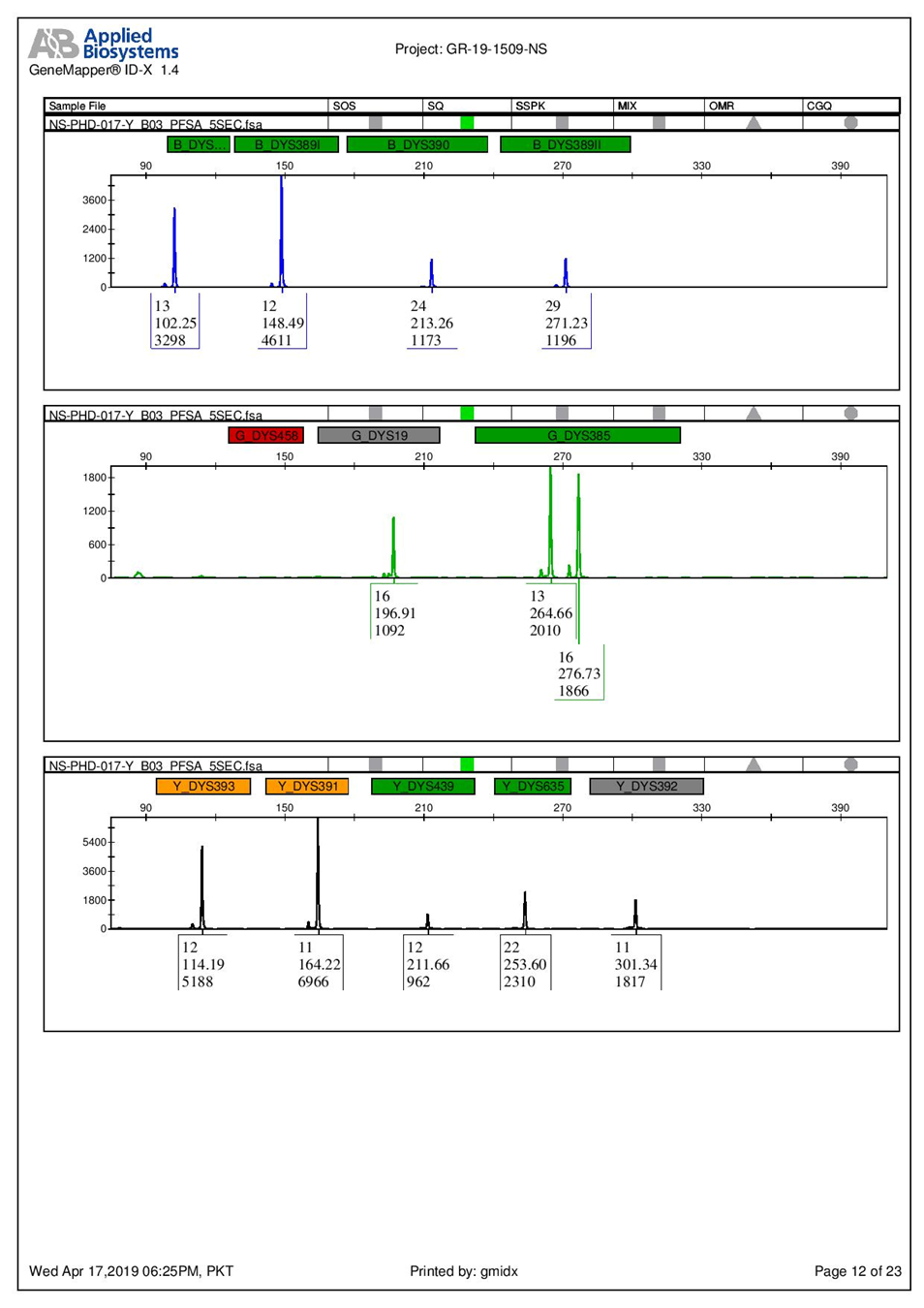
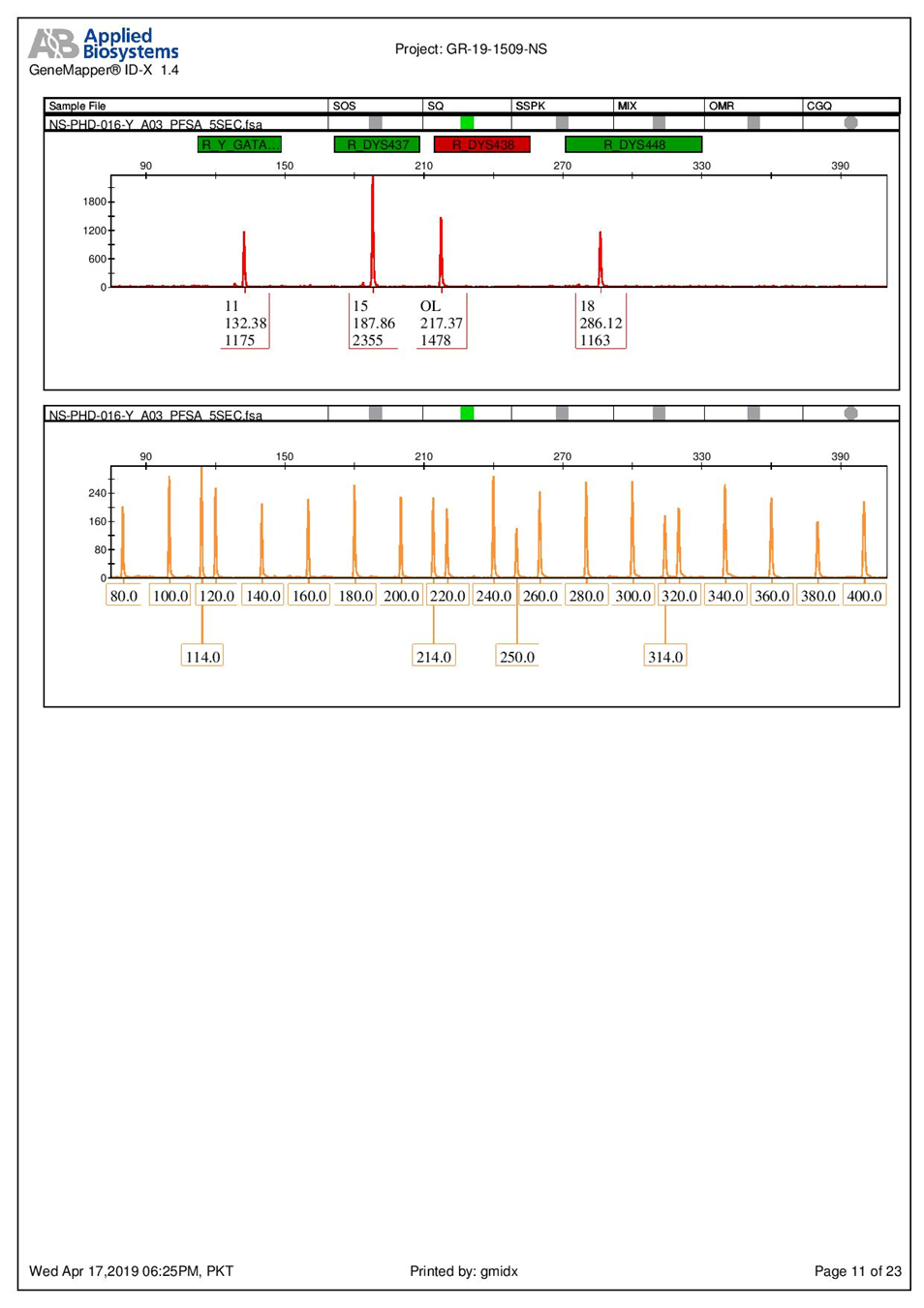
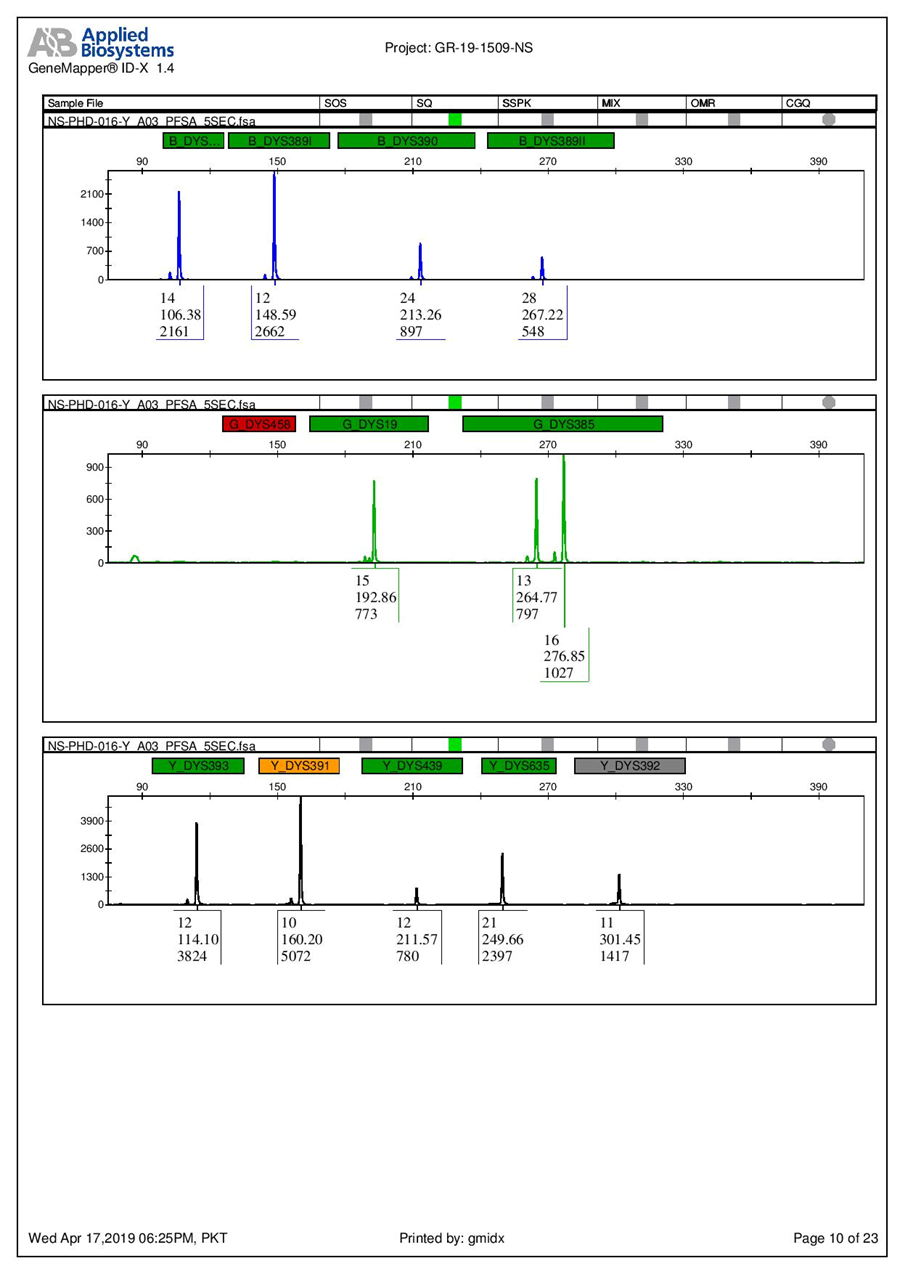
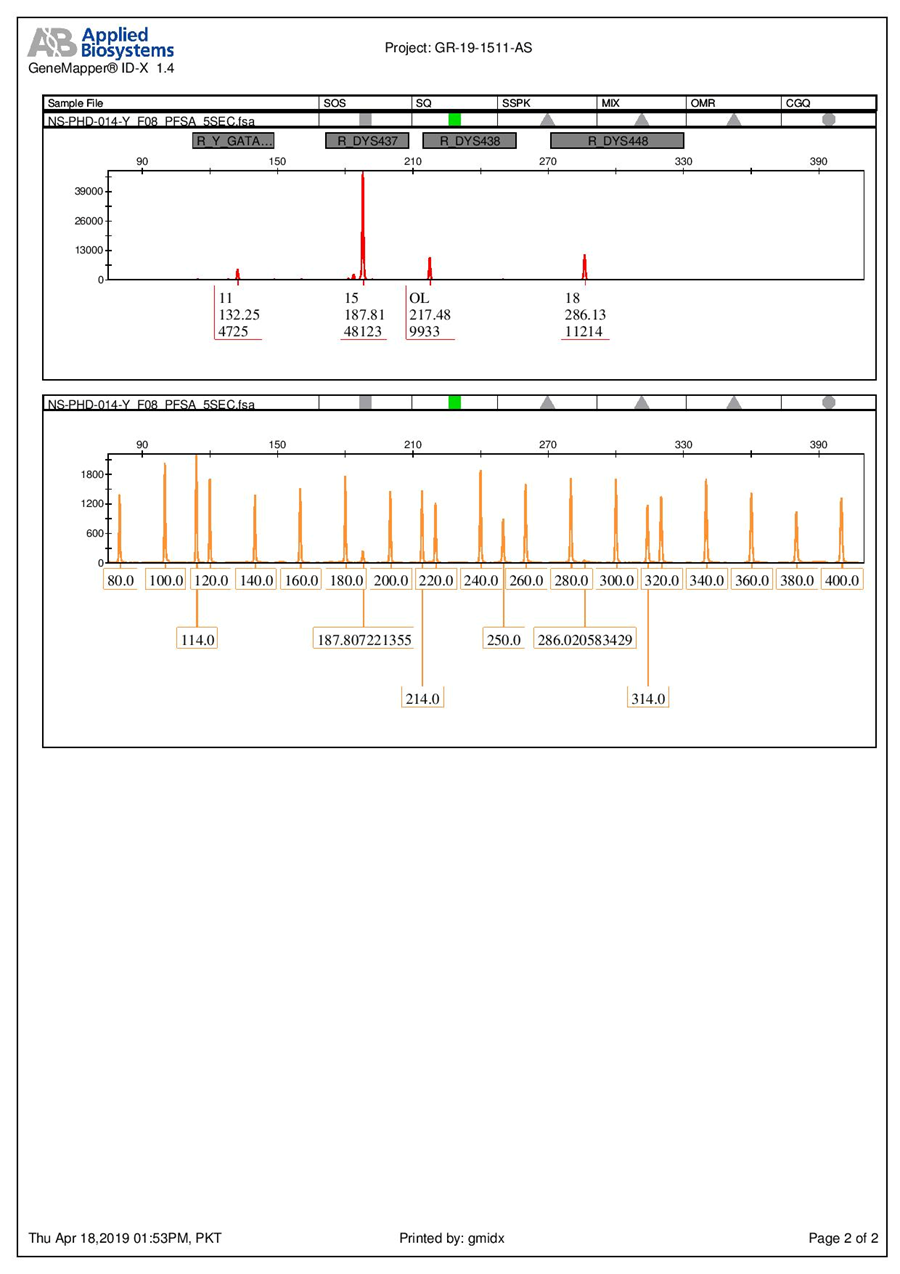
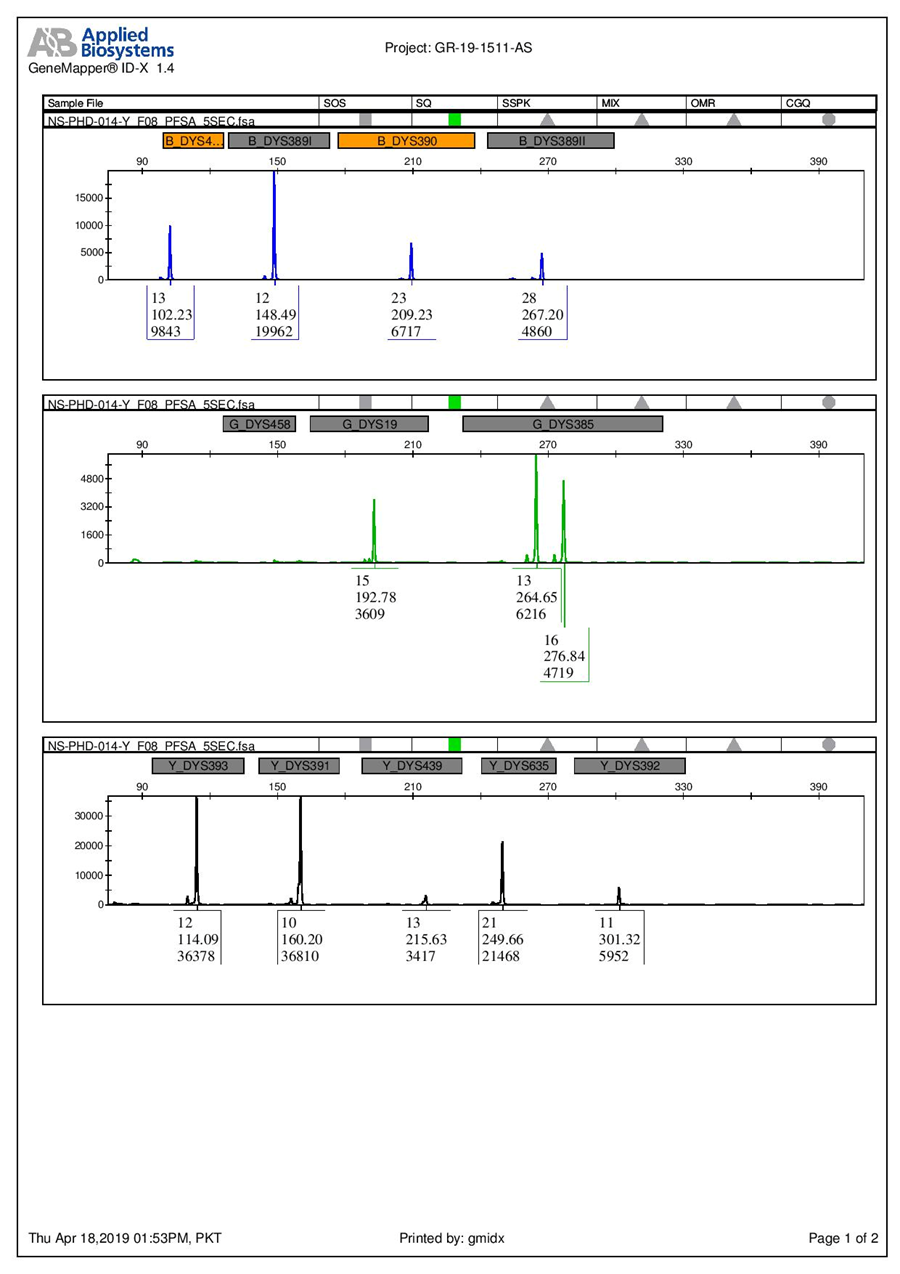
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Table S1: Haplo groups of AMELY null Pakistani Males determined through web based software Nevgen Y-DNA haplogroup predictor

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sample No. | Halpo Group | Clade | Subclade(S) | Probability %age | Unsupported subclade |
| 8 | **R** | R1a | - | 100 | - |
| 1 | **J** | J2b2a | M241 | 99.7 | - |
| 13 | J2b2a | M241 | 99.2 | - |
| 15 | J2b2a | M241 | 99.2 | - |
| 2 | J2b2a | M241 | 98.6 | - |
| 18 | J2b2a | M241 | 98.2 | - |
| 6 | J2b2a | PH1648 M241 | 96.2  3.8 | - |
| 12 | J2b2a | M241 | 87.14 | 9% |
| 7 | J2b2a | M241 | 65.3 | 34.6 |
| 14 | J2b2a | M241 | 65.3 | 34.6 |
| 16 | J2b2a | M241 | 65.3 | 34.6 |
| 17 | J2b2a | M241 | 65.3 | 34.6 |
| 3 | J2b2a | M241 PH1648 | 53.2 43.8 | - |
| 4 | J2b2a | M241 PH1648 | 53.2 43.8 | - |
| 5 | J2b2a | M241 PH1648 | 53.2 43.8 | - |
| 9 | J2b2a | M241 PH1648 | 53.2 43.8 | - |
| 10 | J2b2a | M241 PH1648 | 53.2 43.8 | - |
| 11 | J2b2a | M241 PH1648 | 53.2 43.8 | - |

Table S2: Maximum number of mutations at each character studies in haplotypes of AMEL-Y null Pakistani Males. Two characters are appended to the locus name (e.g. " DYS389II ") to distinguish between repeat-numbers (e.g. "aa"=27 repeats, "ab"=28 repeats)

|  |  |
| --- | --- |
| No. of Mutations | Y STR Locus |
| 5 | DYS389IIab |
| 4 | DYS19ab |
| 3 | DYS635aa , DYS385Bad |
| 2 | DYS19aa , DYS389Iaa , DYS389IIaa , DYS439ab ,  DYS385Bab , DYS385Bac , DYS385Aab , DYS385Aac , DYS635ab |
| 1 | DYS439ac , DYS448aa , DYS438aa , DYS438ab ,  DYS456aa , DYS456ab , DYS390ab , DYS389IIac ,  DYS385Aaa , DYS385Baa , DYS393aa , DYS391aa,  DYS439aa , DYSH4aa , DYS437aa , DYS438ac ,  DYS438ad , DYS438ae , DYS448ab , DYS390aa |