Specification File for New Chips (GSP format)

DataGene requires any Chip used to supply genotypes, to have undergone and passed DataGene's internal QA before any samples on this chip will be used for ABVs.

There is a fee for any new chip to undergo QA. Please contact DataGene for further details on cost and timeframe, if you wish to request this service.

Before a new chip can be used routinely, it must meet the specified requirements and successfully pass a test run. The company supplying the new chip must supply DataGene with:

- 10 genotypes on the new chip for animals that have previously been supplied to DataGene on an existing, approved chip.
- Or genotypes for 10 animals can be supplied on both the new chip and an approved chip (a total of 20 genotypes).

Requirements:

- For chips being loaded for imputation and GEBV calculation purposes:
  - Contain at minimum 75% of the CORE(*) marker set overall
  - 70% coverage of the CORE markers per chromosome
- All sequence data (flanking and alleles) are to be in FORWARD format
- Chromosome and Position is to be from the ARS-UCD1.2 reference genome assembly
- Chip Code must be unique
- Header and Footer are both "GEN Marker Specification File"
- Header and Data rows are all included and formatted correctly (see example below)
- File is tab-delimited

**note – the set of CORE markers is attached in a separate xlsx file. Chips that do not meet the CORE marker requirement can be submitted for use in parentage verification and discovery, but animals with genotypes submitted on these chips will not be eligible for ABVs*

Format:

Please note this is not a complete file but an example for reference with "…" representing the removed section where markers would continue. The flanking sequences have also been cut down for display in this document.

```
GEN MARKER SPECIFICATION FILE
Chip Code        EXAMPLE_63K
Chip
Description      EXAMPLE_63K v12
Read sequence    FORWARD
Genome Build     ARS 1.2
Marker ID        Chr  Posn     Sequence
EX-MX-1294         1  1114564  CTCTGGTACCAGCTGCCGCCC[T/C]GTCACCTCGCATGCTATCAGCA
…
GEN MARKER SPECIFICATION FILE
```