# Data Dictionary for Qiagen qPCR microarray files

The table below describes the attributes (data columns) for all files produced by the Applied Biosystems StepOnePlus™ Real-Time PCR System Software (version 2.2.2) when running Qiagen Microbial DNA qPCR Arrays ARG (BAID-1901ZRC-24). These files include both raw fluorescence (Cnat2022\_ARG\_RawFluorescence.zip) and threshold cycle (Ct) (Cnat2022\_ARG\_Ct.zip) data. Note: Blank cells indicate that no value was recorded and not applicable for the sample.

The metadata for these data files are not complete if they are not distributed with this document.

**Cnat2022\_ARG\_Ct Table**

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| --- | --- |
| **Attribute\_Label** | **Attribute\_Definition** |
| Date | The date and time the qPCR data were generated, in Eastern Standard Time (EST). The date is formatted as YYYY-MM-DD, and the time is HH:MM:SS. |
| Well | The position on the 96-well array (Rows A-H, Columns 1-12). |
| Sample Name | A unique identifier chosen to describe the sample. For this study it is derived from the abbreviated coral species, *Colpophyllia natans* (Cnat), and the bag number in which it was collected. |
| Target Name | The antibiotic resistance gene sequence within the original DNA sample to be amplified. |
| Reporter | The fluorescent dye (fluorescein amidite, abbreviated as FAM) used to prepare oligonucleotide probes for detection of the presence of the target sequence. |
| Quencher | The molecule that absorbs the fluorescence emitted by the reporter dye. For these data, no quencher was used. |
| RQ | Relative quantification is the fold change compared to the calibrator (e.g., untreated sample, time zero). The calibrator has a RQ value of 1. All samples are compared to the calibrator. |
| Ct | Threshold cycle. The Ct is the cycle number at which the fluorescent signal generated within a reaction crosses the threshold line. A value of “undetermined” refers to “below the limit of detection.” |
| Ct Mean | The average of the replicate Ct values. |
| ΔCt Mean | The average of the replicate Ct values for the test gene replicates. |
| ΔΔCt | The calculated ΔΔ Ct value for the replicate group associated with the test sample. |
| Automatic Ct Threshold | An analysis setting in which the software calculates the baseline start and end values and the threshold in the amplification plot. A value of “TRUE” indicates the Ct threshold has been set. A value of “FALSE” indicates that the Ct threshold has not been set or calculated. |
| Ct Threshold | Manually set to 0.2 per protocol. |
| Automatic Baseline | An analysis setting in which the software calculates the baseline start and end values for the amplification plot. A value of “TRUE” indicates the baseline start and end values have been set. A value of “FALSE” indicates that the baseline start and end values have not been set. |
| Baseline Start | The noise level in the beginning cycles. Manually set to 8 per protocol. |
| Baseline End | The noise level in the beginning cycles. Manually set to 20 per protocol. |
| Efficiency | Calculation of the efficiency of PCR amplification. |
| Comments | Extra details added by experimenter pertaining to the specific run. |
| NOAMP | Wells that result in less than 0.1 are considered to have no amplification. A value of “N” indicates more than 0.1 amplification. A value of “Y” indicates less than 0.1 amplification. |

**Cnat2022\_ARG\_RawFluorescence Table**

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| **Attribute\_Label** | **Attribute\_Definition** |
| Sample | A unique identifier chosen to describe the sample. For this study it is derived from the abbreviated coral species, *Colpophyllia natans* (Cnat), and the bag number in which it was collected. |
| Date | The date and time the qPCR data were generated, in Eastern Standard Time (EST). The date is formatted as YYYY-MM-DD, and the time is HH:MM:SS. |
| Well | The position on the 96-well array (Rows A-H, Columns 1-12). |
| Cycle | The cycle number each data point was recorded during. |
| BLUE | The raw fluorescence signal for the blue optical filter. |
| GREEN | The raw fluorescence signal for the green optical filter. |
| YELLOW | The raw fluorescence signal for the yellow optical filter. |
| RED | The raw fluorescence signal for the red optical filter. |