Python: Mabtech Iris Data Sheet Creator Plate Layout

A picture containing light, sitting, clock, large

Description automatically generated

|  |  |  |  |
| --- | --- | --- | --- |
| 1-------> | 9-------> | 17-------> | 25-------> |
| 2-------> | 10-------> | 18-------> | 26-------> |
| 3-------> | 11-------> | 19-------> | 27-------> |
| 4-------> | 12-------> | 20-------> | 28-------> |
| 5-------> | 13-------> | 21-------> | 29-------> |
| 6-------> | 14-------> | 22-------> | 30-------> |
| 7-------> | 15-------> | 23-------> | 31-------> |
| 8-------> | 16-------> | 24-------> | 32-------> |

There are two requirements your plate layout must follow in order to run the Python Mabtech Iris Data Sheet Creator accurately:

1. Stay within the non-arrow dotted lines for triplicates. I.e. columns 1-3, 4-6, 7-9, and 10-11 are the triplicate sections, do not have triplicates going between these groups.
2. The last triplicate(s) per donor MUST be the negative control.

Explained:

The script counts triplets going down the plate, and they will be numbered as such.

1. Therefore, if you have a triplicate that goes over one of the non-arrow dotted lines, it will be split up between two different triplicate numbers and not compared/average correctly. You can have multiple triplicates that each incorporate the same stimuli and donor, but you will need to utilize the triplicate numbering scheme to compare them (except for negatives).
2. The script separates donors based on where you say the negatives per donor are placed. It assumes that every triplicate prior to the negative is all the same donor, and therefore will use that donor’s negative as it’s background. It does not matter how many donors you use, as long as the last triplicate(s) per donor are your negative control and you input the correct locations for these negatives.
   1. Ex: let’s say you have 3 donors per plate. The first donor spans the entire first three columns (A1-H3) and has one triplicate negative, the second donor only spans half the length of columns 4-6 (A4-D6) and has one triplicate negative, and the third donor spans the last columns (A7-H12) and has two triplicate sets of negative.
   2. You would need to make sure that donor one’s negative triplicate is H1-H3 and is inputted as H1,H2,H3 (this input is specified in the script itself). Donor two’s negative triplicate will be D4-D6 and is inputted as D4,D5,D6. Donor three’s negative triplicates will be G10-G11 and H10-H11 and are inputted as G10,G11,G12,H10,H11,H12.
   3. The resulting MS will correctly assume and the locations of donor 1 and 2, but incorporate the blank cells to donor 3. Donor 3’s results won’t be affected by the blanks because they shouldn’t have a significant result after the background is taken away (or they won’t be included if you didn’t select for those wells to be read on the Iris reader).

Note: If you did not fill the entire plate, that is fine. Blanks will come up as zero or will be skipped depending on the Mabtech Iris output, but actual datum will be reserved.