TrackMate parameters.

For all videos, spots were detected using a LoG detector, a 10.0 pixel estimated blob diameter, 0.0 threshold, and sub-pixel localization. Search radii were 15 pixels with a frame linking gap max distance of 2 frames. The data generated for the submitted manuscript used a simple LAP tracker.

Essentially, all default values were used, except in the initial thresholding of detected spots, spot quality thresholding, spot locational filtering, and track quality. These filtering values are given below

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Dataset | Init. Thresholding | Spot min quality | Spot min\_y | Spot max\_y | Track mean\_quality |
| Pipe | 1.23 | 3.91 | 27.08 | 634.36 | 4.48 |
| Flow1 | 1.37 | 3.25 | 132 | 499.88 | 3.55 |
| Flow9 | 1.46 | 3.73 | NA | 474.41 | 3.82 |
| Flow14 | 1.35 | 3.61 | NA | 451.42 | 3.84 |
| Flow1half1 | 1.31 | 3.25 | NA | NA | NA |
| Flow1half2 | 1.31 | 3.24 | NA | NA | NA |
| Flow9half1 | 1.27 | 3.30 | NA | NA | NA |
| Flow9half2 | 1.27 | 3.31 | NA | NA | NA |
| Flow14half1 | 1.35 | 3.72 | NA | NA | NA |
| Flow14half2 | 1.36 | 3.68 | NA | NA | NA |
| Flow1evens | 1.25 | 3.32 | NA | NA | NA |
| Flow1odds | 1.25 | 3.32 | NA | NA | NA |
| Flow9evens | 1.27 | 3.25 | NA | NA | NA |
| Flow9odds | 1.27 | 3.24 | NA | NA | NA |
| Flow14evens | 1.09 | 3.05 | NA | NA | NA |
| Flow14odds | 1.10 | 3.01 | NA | NA | NA |