This protocol is adapted from Alfred (<https://github.com/amsikking/fluorescent_beads_in_agarose>) and water dipping objective lens is assumed. Be sure to differentiate between water dipping and water immersion objective lens before using this protocol.

Fluorescent nanobeads in agarose:

Reagent:

* 0.2um TetraSpeck nanosphere
* Ultra-pure agarose powder
* RO water
* 35mm petri dish

Steps:

1. Weight 0.1g (can be adjusted and no need to be precise) of agarose powder in a test tube
2. Add in RO water to reach 1% w/v ratio
3. Cap the test tube using rubber septum and microwave the test tube at 5s interval for 40s or until the powder is completely dissolved
4. Prepare an Eppendorf and preset the volume on pipette tips (396ul, 4ul and 50ul), bring the vortex and petri dish to benchtop. Make everything ready to use as following steps should be performed as fast as possible
5. When the agarose solution reaches the temperature slightly hot for hand, extract 396ul of the solution into the Eppendorf
6. Add in 4ul of nano beads and vortex for 10s
7. Extract 50ul of the mixture and drop it onto the petri dish. 50ul will be enough to form multiple droplets and the size of each droplet does not matter
8. Wait until the agarose solution fully gels and add in enough RO water to immerse the gel droplets