OD-CDW correlation of algae Chlorella vulgaris

For estimation of the cellular dry weight, we marked 15 x 90 mm glass test tubes with numbers going from 1-70 and put them for 7 days in a cleanroom drying oven UF750plus from Memmert GmbH + Co. KG. Afterwards each test tube was weighed with the laboratory scale sartorius Basic from sartorius AG. The weight was noted together with the corresponding numbers. Measurements were preformed over a period of one month. Two times 10 ml of Chlorella vulgaris culture were taken out of the self-built 37-liter airlift reactor and transferred into the prepared test tubes. An additional ml was taken for optical density measurement at 750 nm in the Ultraspec 1100 pro from Amersham Biosciences. The optical density was noted referred to the corresponding test tube numbers. The test tubes with the 10 ml algae culture were centrifuged at 5000 g for 10 minutes. Supernatant was discarded, washed with distilled water twice and the tubes were put into the Cleanroom drying oven UF750plus from Memmert GmbH + Co. KG. After six days the weight with the pellet was measured again with the laboratory scale sartorius Basic from sartorius AG. To calculate the dry weight, the mass of the tubes containing the pellets subtracted by the mass of the tubes without the pellets was divided by the volume (10 mL).