**Growth and NO3- and NO2- reduction under oxic and anoxic conditions.**

Strain JAM1T and GP59 were cultured under three conditions: anoxic with 21.4 mM NO3- («AN»), oxic with NO3- («ON»; 21.4 mM NO3-) and oxic without NO3- («O»). OD600nm, and NO3- and NO2- concentrations were measured at different time intervals. Each point is the average with the standard deviation of triplicate cultures.

Une image contenant diagramme, texte, Plan, Dessin technique

Description générée automatiquement

Strain JAM1T grew immediately with no apparent lag phase under the «AN» conditions, and with a growth yield of around 0.2 OD600nm. Under the «ON» and «O» conditions, strain JAM1T reached a growth yield between 0.6 and 0.8 OD600nm after 24h. The complete reduction of NO3- was observed within 20 h with strain JAM1 cultured under the «ON» or «AN» conditions, with accumulation of NO2-.

Strain GP59 showed a 24-48-h lag phase before growth occurred under the «AN» conditions. Complete reduction of NO3- and NO2- was achieved within 70 h. The maximum growth yield was 3 times higher (up to 0.6 OD600nm) than what was found with strain JAM1T cultured under the same conditions. In previous work (Geoffroy *et al.*, 2018), we showed that strain GP59 reached higher level of growth (1.0 OD600nm) under the «AN» conditions with 42.8 mM NO3-, whereas strain JAM1 still reached the same level of growth (0.2 OD600nm). Finally, under the «O» and «ON» conditions, strain GP59 grew with no apparent lag phase, and reach approximately the same level of growth than strain JAM1T cultured under the same conditions No reduction of NO3- was observed with strain GP59 cultured under the «ON» conditions.