



Supplementary Figure S6. Growth curves of *Prochlorococcus* SB and *Prochlorococcus* MIT0604 in the presence of either ammonium or urea as the sole nitrogen source. Values are mean \pm 1 standard deviation of duplicate cultures. When error bars do not show, they are within the size of the symbol. Both SB and MIT0604 have the ability to growth on urea at the same rate as growth on ammonium, consistent with the presence of urease genes. When grown on urea, both strains reach final cell yields that are near double that achieved when supplied with ammonium as the sole nitrogen source (SB: $1 \times 10^8 \pm 5 \times 10^5$ cells mL⁻¹ on ammonium vs. $1.8 \times 10^8 \pm 6 \times 10^6$ cells mL⁻¹ on urea; MIT0604: $8.6 \times 10^7 \pm 1 \times 10^6$ cells mL⁻¹ on ammonium vs. $2.2 \times 10^8 \pm 5 \times 10^6$ cells mL⁻¹ on urea), indicating that both amino functional groups are removed from the urea molecule, transported into the cell and utilized for growth. Specific growth rates for SB were 0.362 ± 0.004 d⁻¹ on ammonium and 0.36 ± 0.01 d⁻¹ on urea. Specific growth rates for MIT0604 were 0.304 ± 0.003 d⁻¹ on ammonium and 0.292 ± 0.003 d⁻¹ on urea.