**Figure S1**



**B**

**A**

 **C**

****

**Growth phenotypes of 4/74 parental strain and Δ*ptsHI crr*+, Δ*ptsHI*Δ*crr* and Δ*crr* strainsin media supplemented with either glycerol or NAG as sole carbon sources.** Results from duplicate phenotype arrays (BiOLOG) showing growth characteristics of 4/74 parental strain (blue) and Δ*ptsHI crr*+(green), Δ*ptsHI*Δ*crr* (purple) and Δ*crr* strains (red) in media containing either (A) glycerol or (B) NAG as sole carbon sources. The Δ*ptsHI*Δ*crr* and Δ*crr* show similar growth characteristics to the parent strain (4/74) in media containing glycerol whereas the Δ*ptsHI crr*+ strain (green) shows considerably retarded growth. The latter phenotype is likely due to the inhibition of glycerol uptake by unphosphorylated EIIAGlc, as described in [48], which can eventually be partially compensated by phosphorylated EIINag. Neither the Δ*ptsHI* *crr*+ or Δ*ptsHI*Δ*crr* strains grew in media containing NAG, whereas the Δ*crr* strain (red) did grow on NAG as sole carbon source. This is most likely due to deletion of the *ptsHI* genes resulting in the inability to phosphorylate EIINag and therefore import NAG into the cell [26]. (C) Confirmation of the growth phenotypes of the 4/74, Δ*ptsHI* *crr*+, Δ*ptsHI*Δ*crr* and Δ*crr* strains on M9 minimal media plates containing either glycerol or NAG as sole carbon sources.