Supplementary Material

# Growth of *C. glutamicum* wild type on glucose in the absence and presence of the phenolic compounds ferulic acid, vanillin and vanillic acid

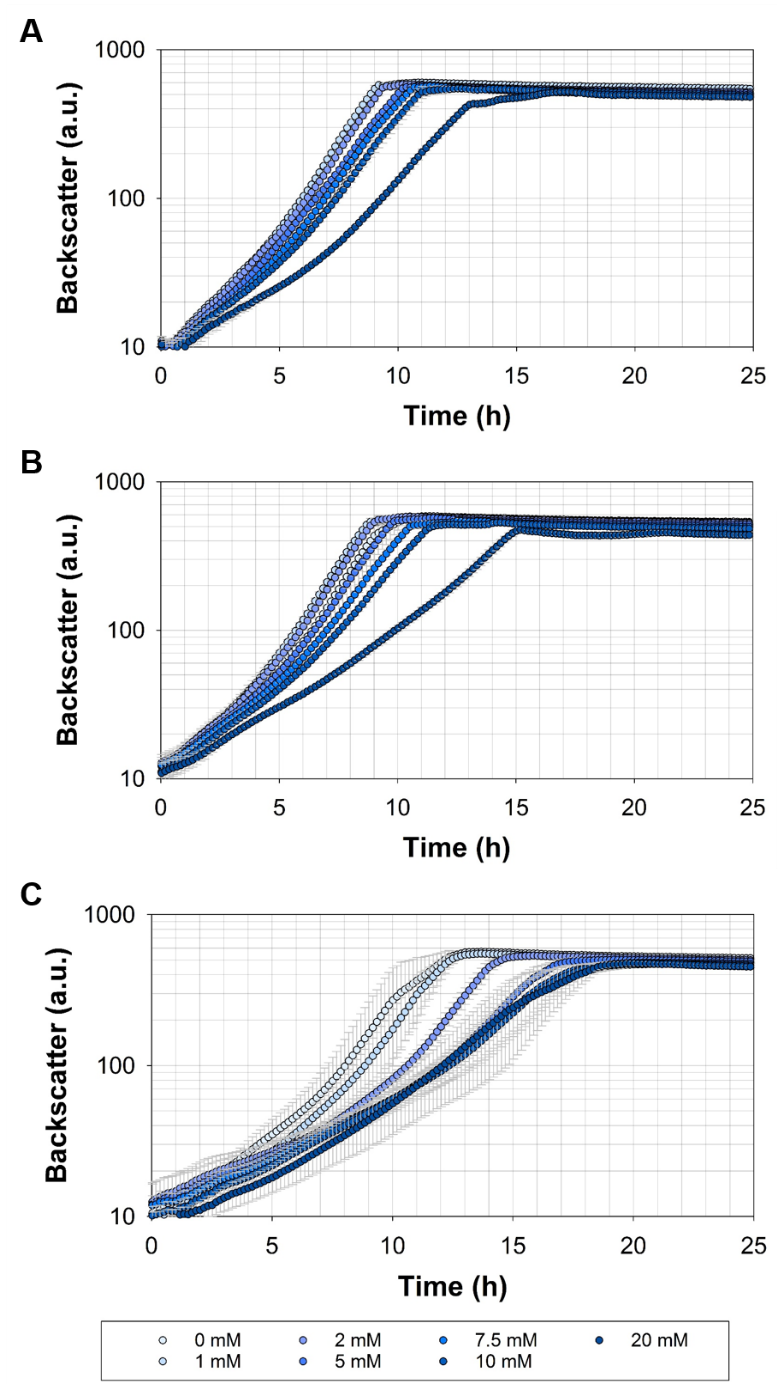


Figure S1: Growth of *C. glutamicum* wild type in microliter scale cultivations with CGXII minimal medium and 20 g glucose L-1 with different concentrations (shades of blue) of (A) ferulic acid, (B) vanillin and (C) vanillic acid. Error bars represent standard deviation of at least three cultivations.

# Growth of *C. glutamicum* ΔP*aceE*::*vanR*-P*vanABK*\* on glucose in the absence and presence of the phenolic compounds ferulic acid, vanillin and vanillic acid

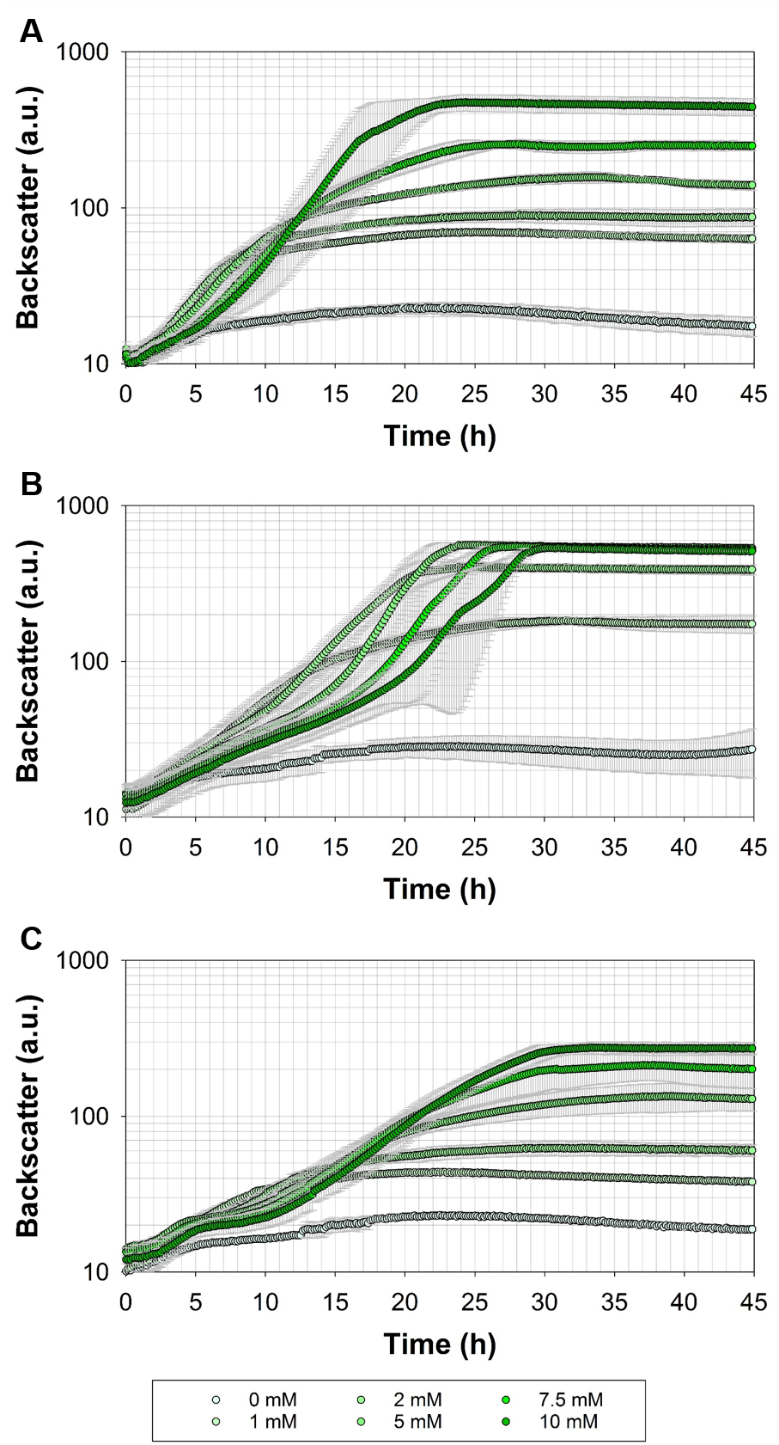


Figure S2: Growth of *C. glutamicum* ΔP*aceE*::*vanR*-P*vanABK*\*in microliter scale cultivations with CGXII minimal medium and 20 g glucose L-1 with different concentrations (shades of green) of (A) ferulic acid, (B) vanillin and (C) vanillic acid. Error bars represent standard deviation of at least three cultivations.

# Glucose consumption and product accumulation of *C. glutamicum* wild type andΔP*aceE*::*vanR*-P*vanABK*\* in shaking flask cultivations supplemented with one specific concentration of ferulic acid, vanillin or vanillic acid

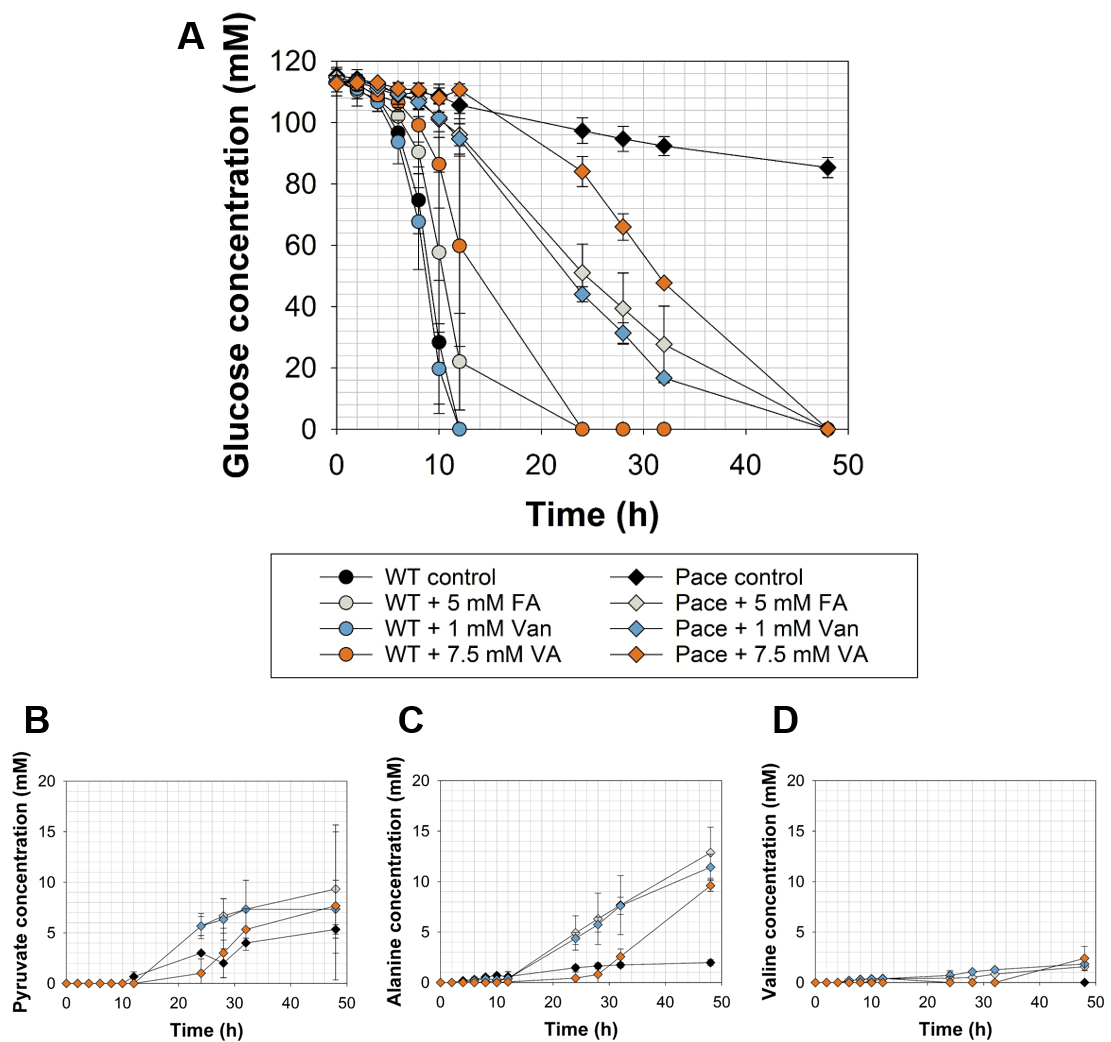


Figure S3: (A) Glucose consumption and (B – D) product accumulation of *C. glutamicum* wild type (circles; WT) and ΔP*aceE*::*vanR*-P*vanABK*\*(diamonds; Pace) in shaking flasks with CGXII minimal medium and 20 g glucose L-1 without (black) and with 5 mM ferulic acid (grey; FA), 1 mM vanillin (blue; Van) or 7.5 mM vanillic acid (orange; VA). Error bars represent standard deviation of cultivations of at least three biological replicates.

# Consumption of glucose and accumulation of pyruvate and alanine of *C. glutamicum* ΔP*aceE*::*vanR*-P*vanABK*\* (pJC4-*ilvBNCE*) in shaking flask cultivations supplemented with one specific concentration of ferulic acid, vanillin or vanillic acid

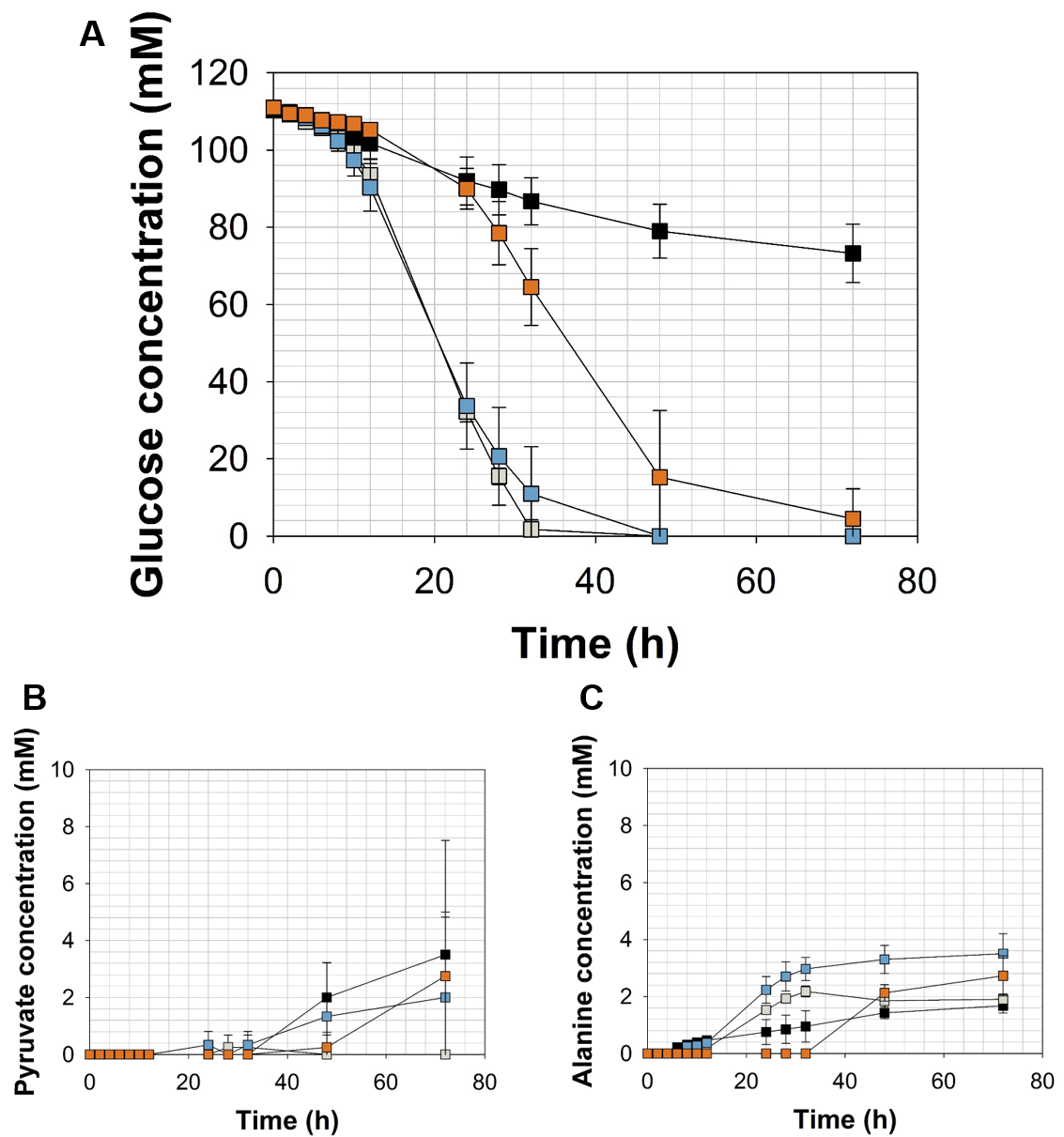


Figure S4: (A) Glucose consumption and (B – C) pyruvate and alanine accumulation of *C. glutamicum* ΔP*aceE*::*vanR*-P*vanABK*\*(pJC4-*ilvBNCE*) in shaking flasks with CGXII minimal medium (with 20 g ammonium sulfate L-1) and 20 g glucose L-1 without (black) and with 5 mM ferulic acid (grey), 1 mM vanillin (blue) or 7.5 mM vanillic acid (orange). Error bars represent standard deviation of cultivations of at least three biological replicates.

# Consumption of ferulic acid, vanillin or vanillic acid of *C. glutamicum* ΔP*aceE*::*vanR*-P*vanABK*\* (pJC4-*ilvBNCE*) and *C. glutamicum* ΔP*aceE*::*vanR*-P*vanABK*\* (pJC4) in shaking flask cultivations

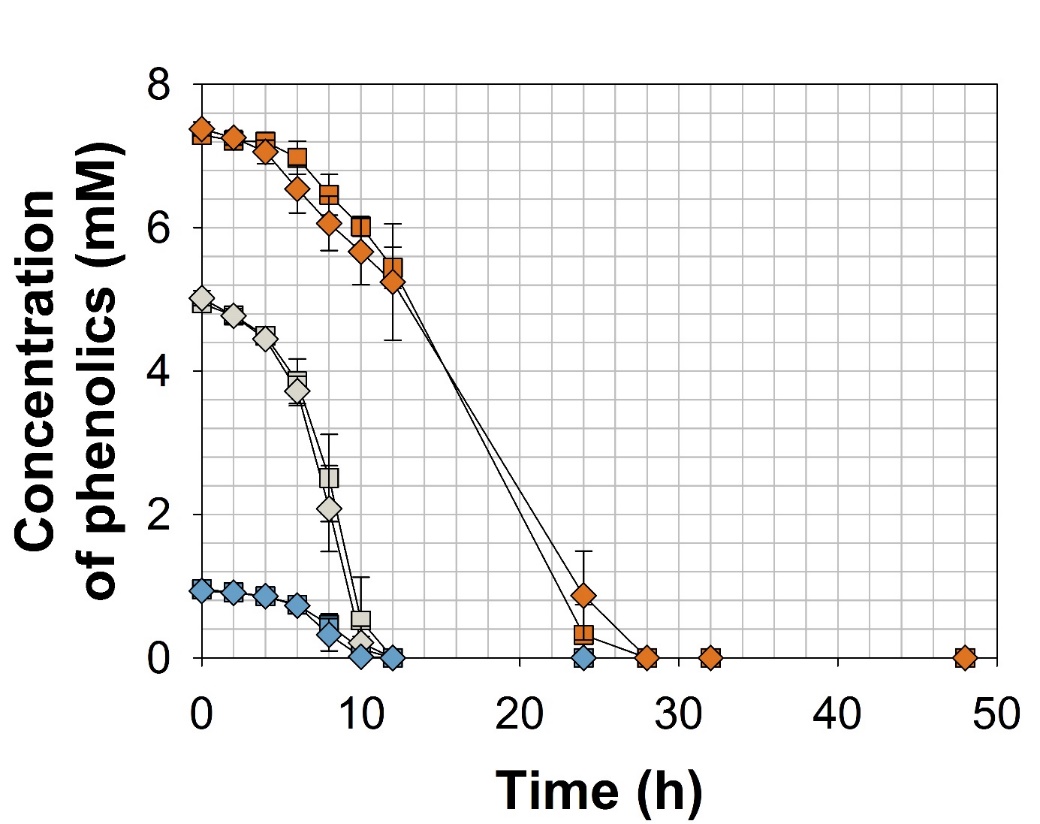


Figure S5: Phenolic compound consumption of *C. glutamicum* ΔP*aceE*::*vanR*-P*vanABK*\*(pJC4-*ilvBNCE*) (squares) and *C. glutamicum* ΔP*aceE*::*vanR*-P*vanABK*\*(pJC4) (diamonds) in shaking flasks with CGXII minimal medium (with 20 g ammonium sulfate L-1) and 20 g glucose L-1 with ferulic acid (grey), vanillin (blue) or vanillic acid (orange). Error bars represent standard deviation of cultivations of at least three biological replicates.

# Growth, consumption of glucose and accumulation of pyruvate, alanine and valine of *C. glutamicum* ΔP*aceE*::*vanR*-P*vanABK*\* (pJC4) in shaking flask cultivations supplemented with one specific concentration of ferulic acid, vanillin or vanillic acid



Figure S6: (A) Growth (B) glucose consumption and (C – D) pyruvate, alanine and valine accumulation of *C. glutamicum* ΔP*aceE*::*vanR*-P*vanABK*\*(pJC4) in shaking flasks with CGXII minimal medium (with 20 g ammonium sulfate L-1) and 20 g glucose L-1 without (black) and with 5 mM ferulic acid (grey), 1 mM vanillin (blue) or 7.5 mM vanillic acid (orange). Error bars represent standard deviation of cultivations of at least three biological replicates.