

**Supplementary figure 1. Scheme representing experimental steps for deletion of *citT* gene from the *A. niger* genome.** A) The 5' flanking region of the *citT* gene was amplified with primers citT\_KO\_5Flank\_FW\_p1 and citT\_KO\_5Flank\_RV\_p2. The 3' flanking region of the *citT* gene was amplified with primers citT\_KO\_3Flank\_FW\_p3 and citT\_KO\_3Flank\_RV\_p4. The *pyrG* gene was amplified with primers AOpyrG12FW\_p5 and AOpyrG13RV\_p6. B) Deletion of the *citT* gene by the split marker method consisting of two overlapping DNA fragments to disrupt of the *citT* gene. Fragment one contains the 5' flank of the *citT* gene and a partial version of the *pyrG* gene and was constructed by primers citT\_KO\_5Flank\_FW\_p1 and AOpyrG15RV\_p8. Fragment two contains an overlapping partial version of the selection marker and the 3' flank of the *citT* gene and was established by using primers AOpyrG14FW\_p7 and citT\_KO\_3Flank\_RV\_p4. C) Deletion of the *citT* gene by the split marker method using the two overlapping DNA fragments and transformation in *A. niger* strain MA169.4. D) Confirmation of the integration position. The citT\_KO\_FW\_p11 and AOpyrG\_KO\_RV\_p13 and the AOpyrG\_KO\_FW\_p14 and citT\_KO\_RV\_p12 were applied to check on the 5′flanking and the 3′ flanking region, respectively. The gene replacement and the purity of the knock-out strains were also checked (scheme does not show). The AOpyrG13RV\_p6 and AOpyrG13RV\_p6 primers were used to determine the *pyrG* marker gene replacement and the citT\_1FW and citT\_1770RV primers were verified the purity of the knock-out strains.