

Supplementary Information

1. *Growth curves of Planococcus halocryophilus*

- All growth curves were obtained as described in section 2 of the main text
- Cells were grown aerobically in liquid growth medium (DMSZ #92) containing salt amounts as indicated within the figure legends
- All curves obtained as biological duplicates (samples [A] and [B])
- Dashed lines indicate a 2nd run of a specific experiment
- X indicates the detection limit (no detectable CFU within 100 μ l sample)
- Negative error bars reaching values of $y \leq 0$ CFU/ml were removed.
- IM – Inoculation method as described in section 2.2 of the main text

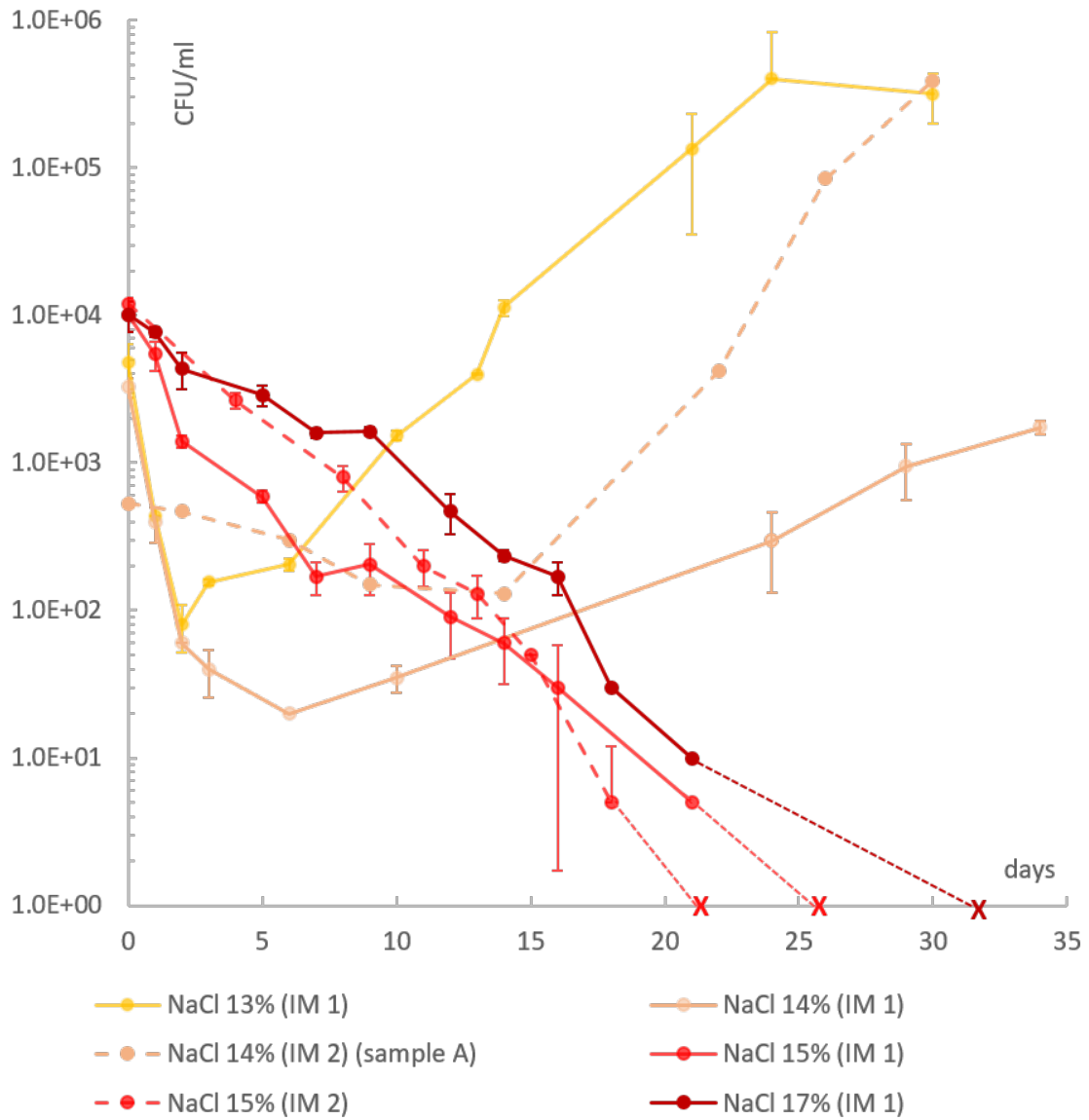


FIG. S1: Growth curves in NaCl containing media at 25°C. NaCl 14% (IM 2) (sample B) got contaminated.

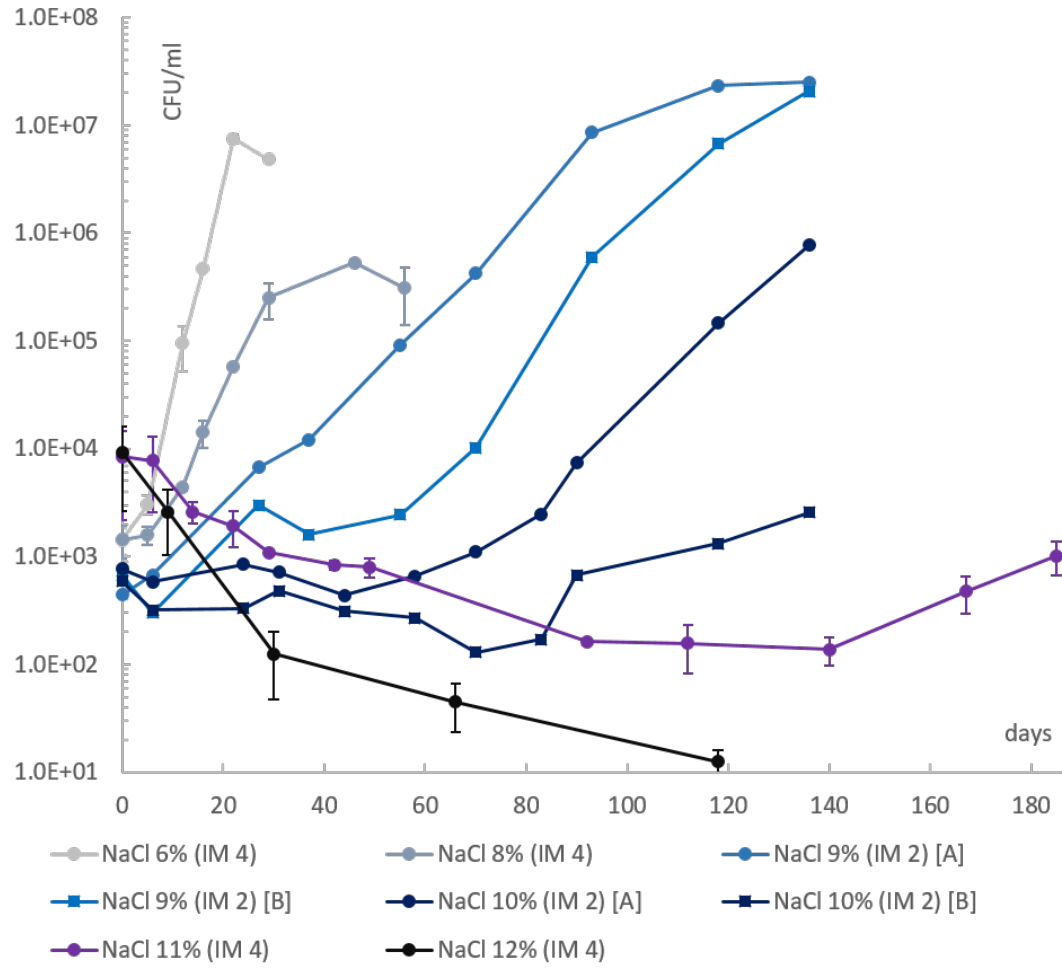


FIG. S2: Growth curves in NaCl containing media at 4°C. Biological duplicates A and B were not averaged for 9%- and 10%-samples due to differences in growth. No detectable CFUs in the 12% NaCl sample after 200 days.

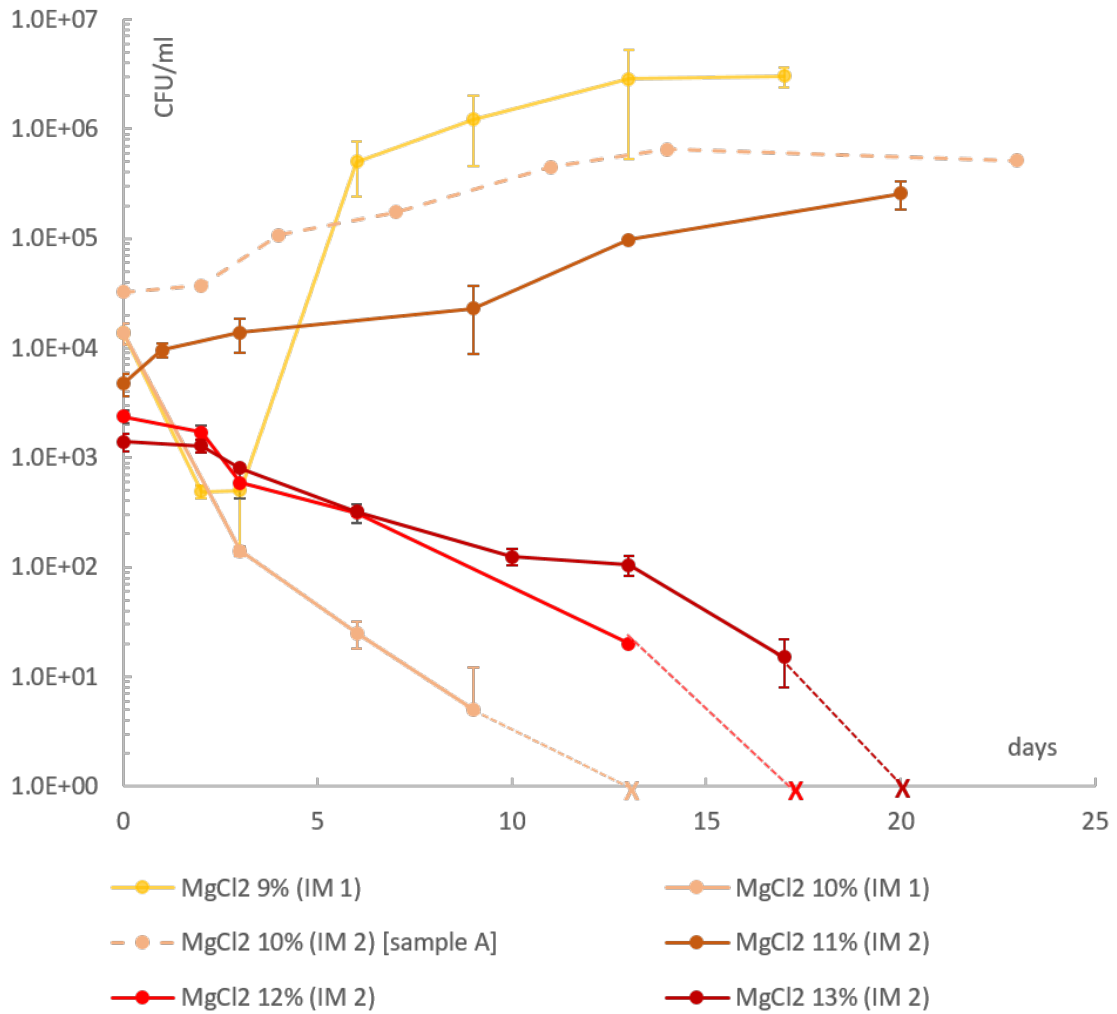


FIG. S3: Growth curves in MgCl₂ containing media at 25°C. MgCl₂ 10% (IM 2) (sample B) did not show growth.

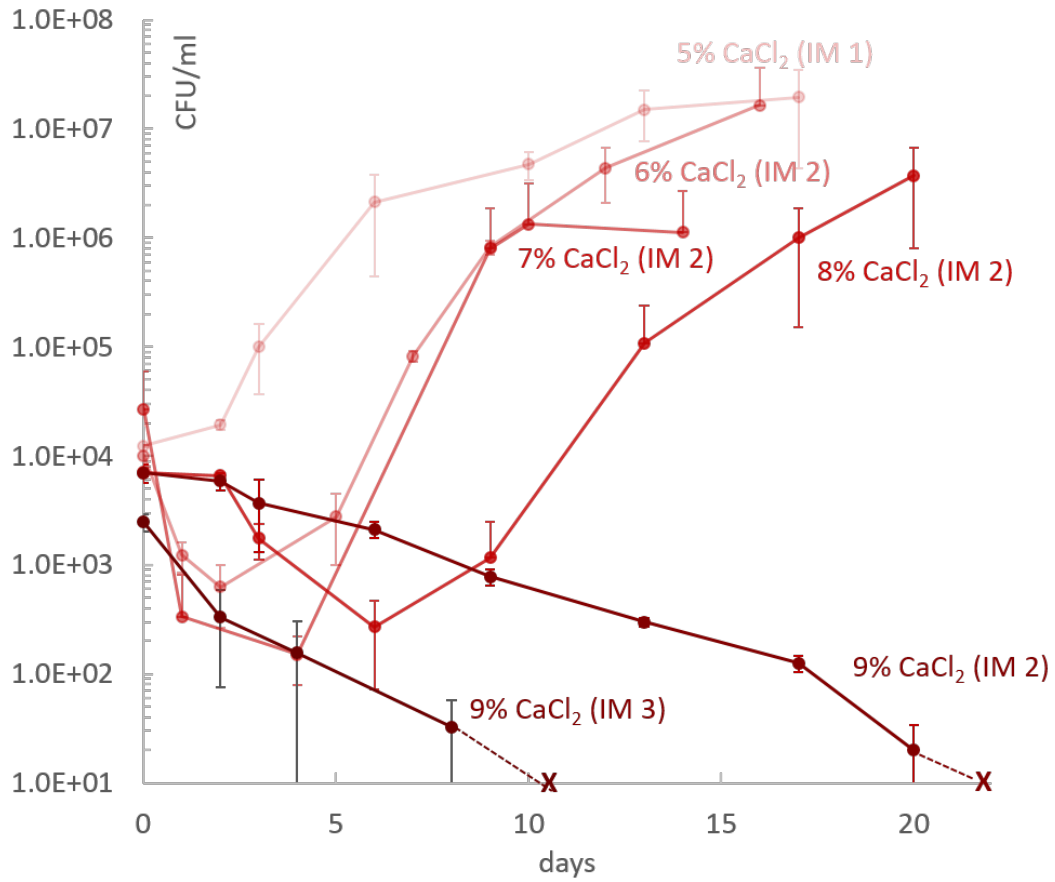


FIG. S5: Growth curves in CaCl₂ containing media at 25°C. See also Fig. 1 in the main text.

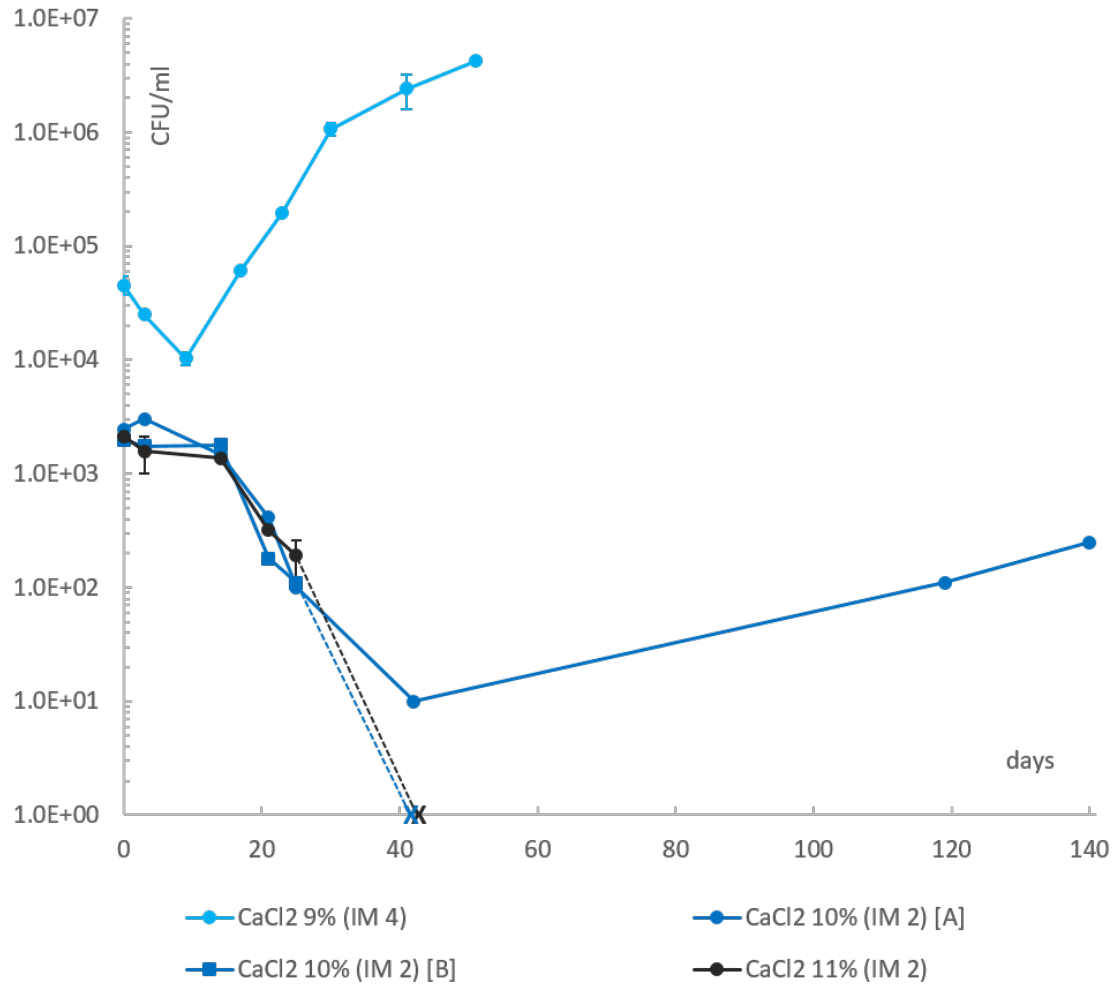


FIG. S6: Growth curves in CaCl₂ containing media at 4°C. Biological duplicates A and B were not averaged for 10%-samples due to differences in growth. See also Fig. 1 in the main text.

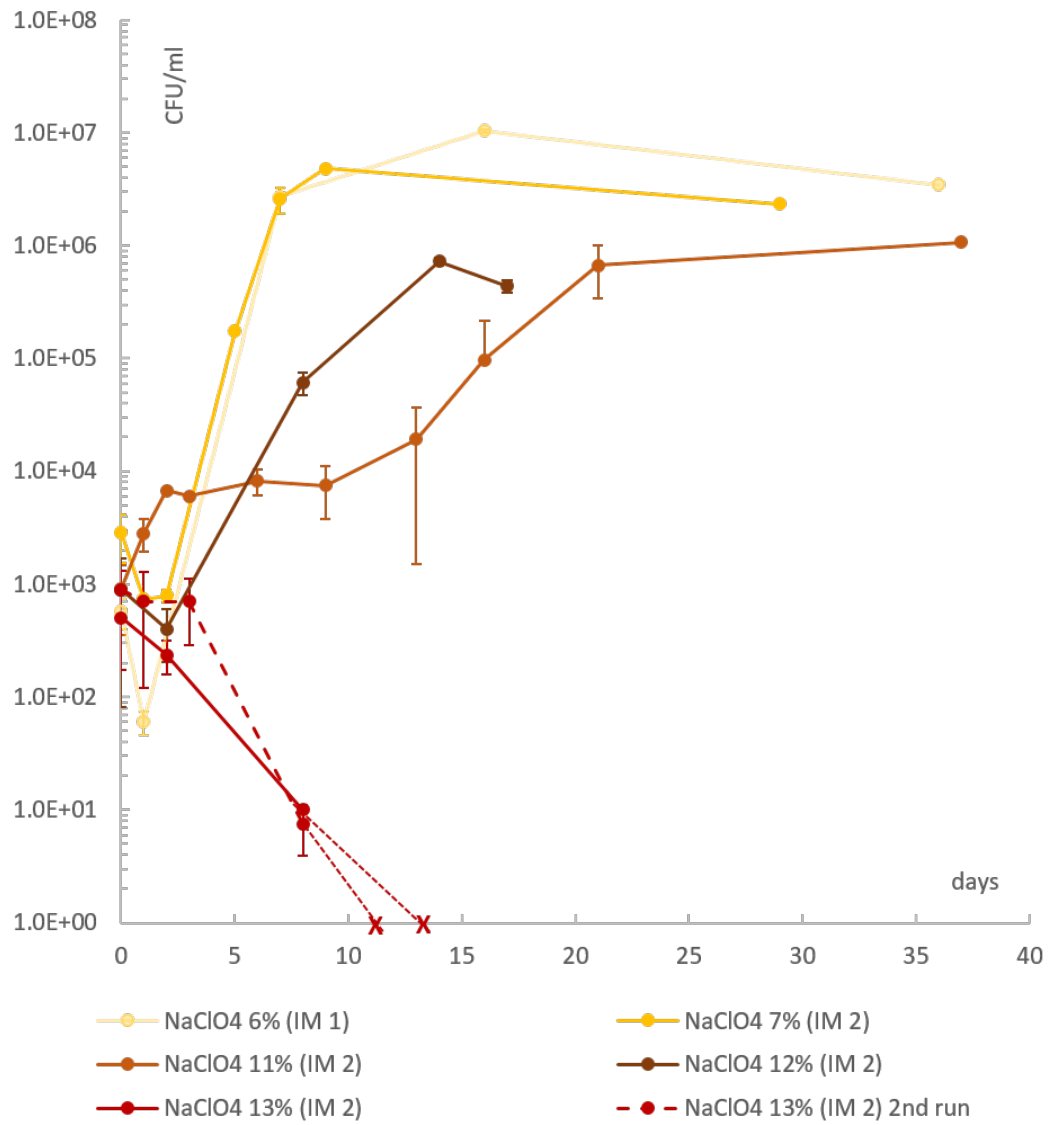


FIG. S7: Growth curves in NaClO₄ containing media at 25°C.

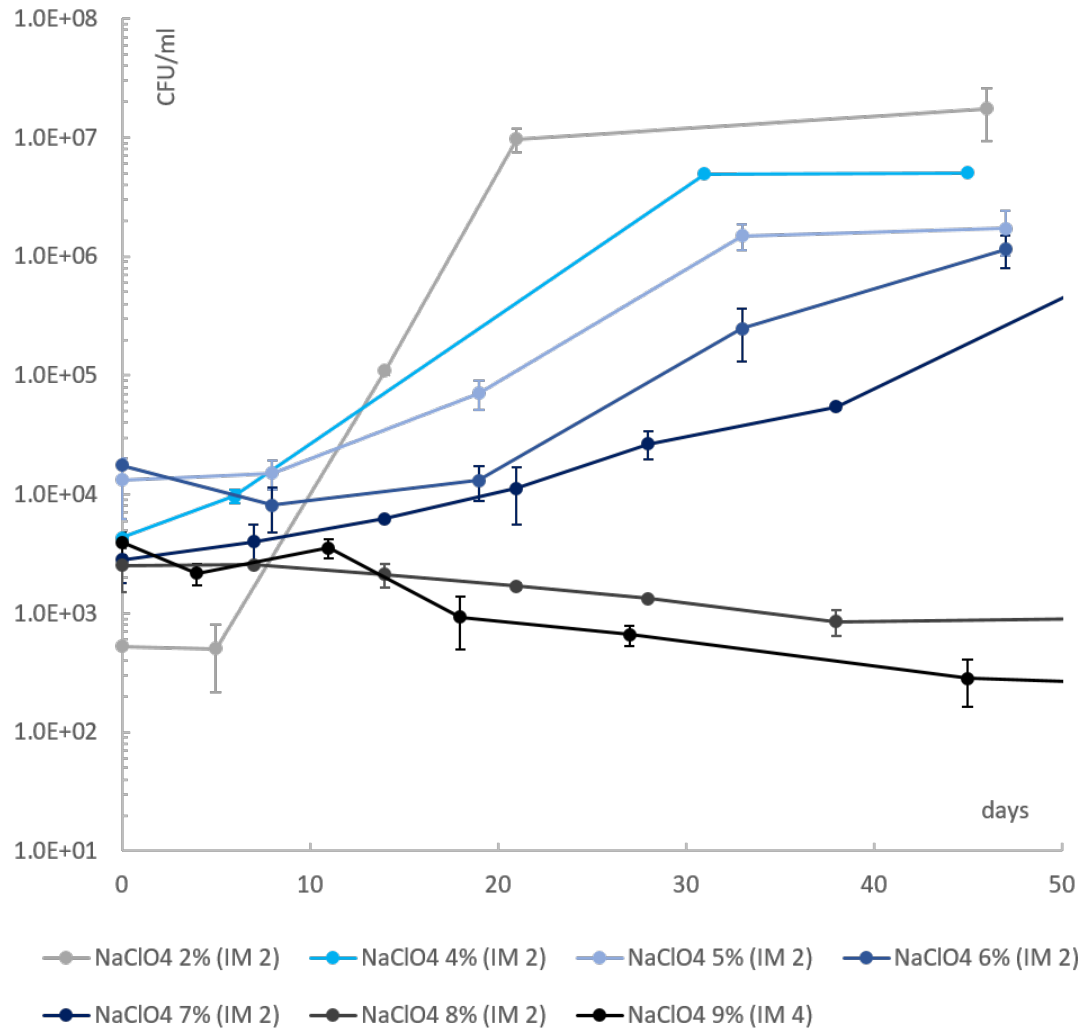


FIG. S8: Growth curves in NaClO₄ containing media at 4°C. NaClO₄ 2% (IM 2) was inoculated with culture grown in media with 3 wt% Ca(ClO₄)₂ at 4°C. No detectable CFUs in NaClO₄ 9% after 207 days.

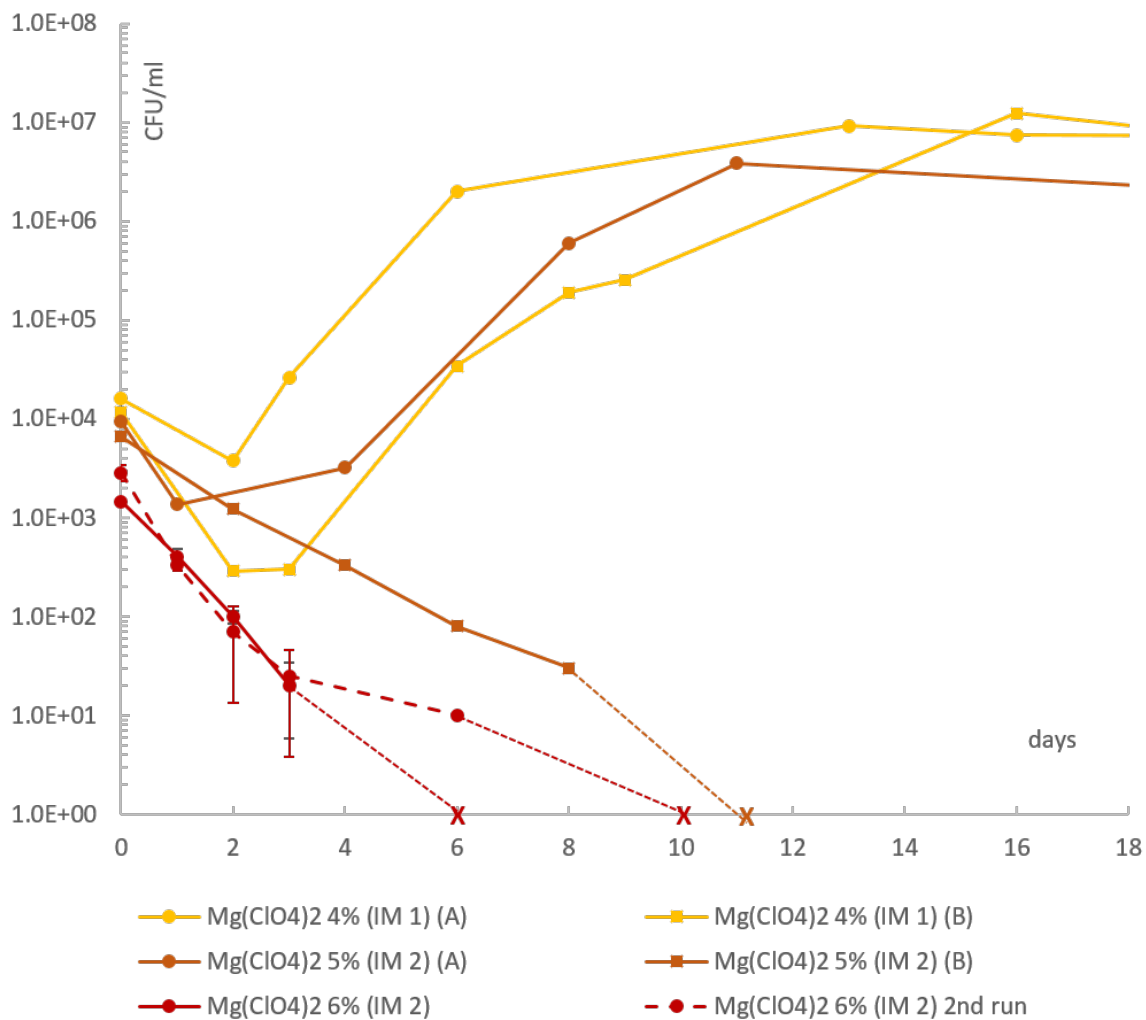


FIG. S9: Growth curves in $Mg(ClO_4)_2$ containing media at 25°C. Biological duplicates A and B were not averaged for 4%- and 5%-samples due differences in growth.

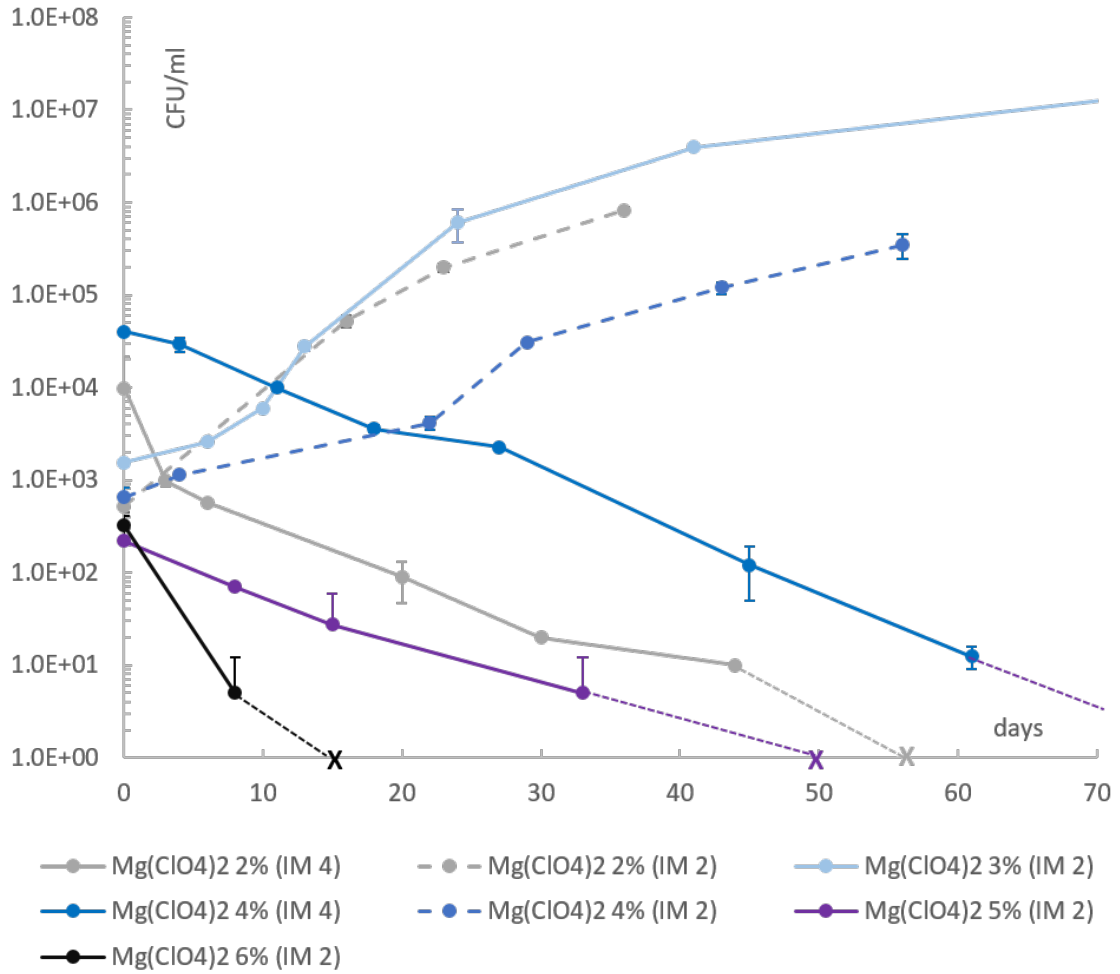


FIG. S10: Growth curves in Mg(ClO₄)₂ containing media at 4°C. Mg(ClO₄)₂ 2% (IM 2) was inoculated with a culture grown in media with 3 wt% Ca(ClO₄)₂ at 4°C since inoculation with a culture grown in 5% Mg(ClO₄)₂ medium at 25°C (IM 4) did not result in growth.

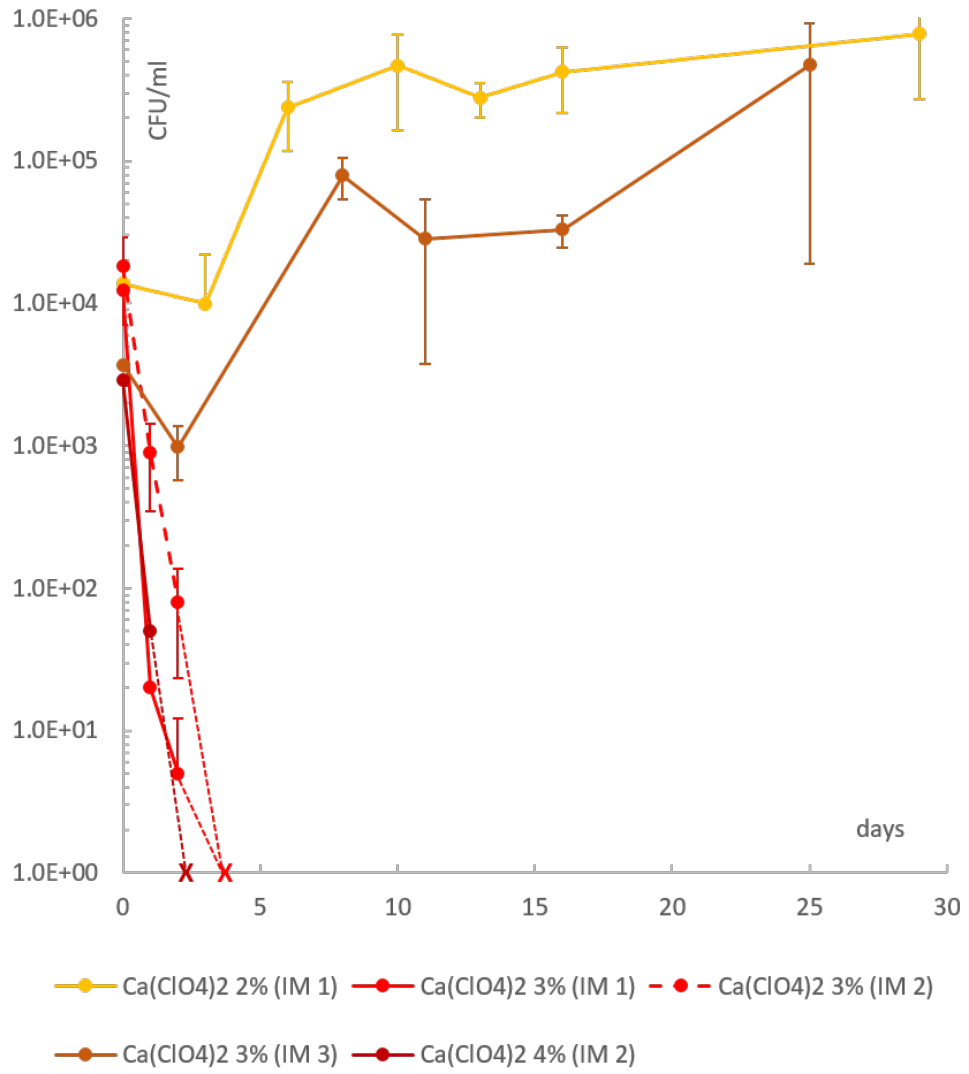


FIG. S11: Growth curves in $\text{Ca}(\text{ClO}_4)_2$ containing media at 25°C.

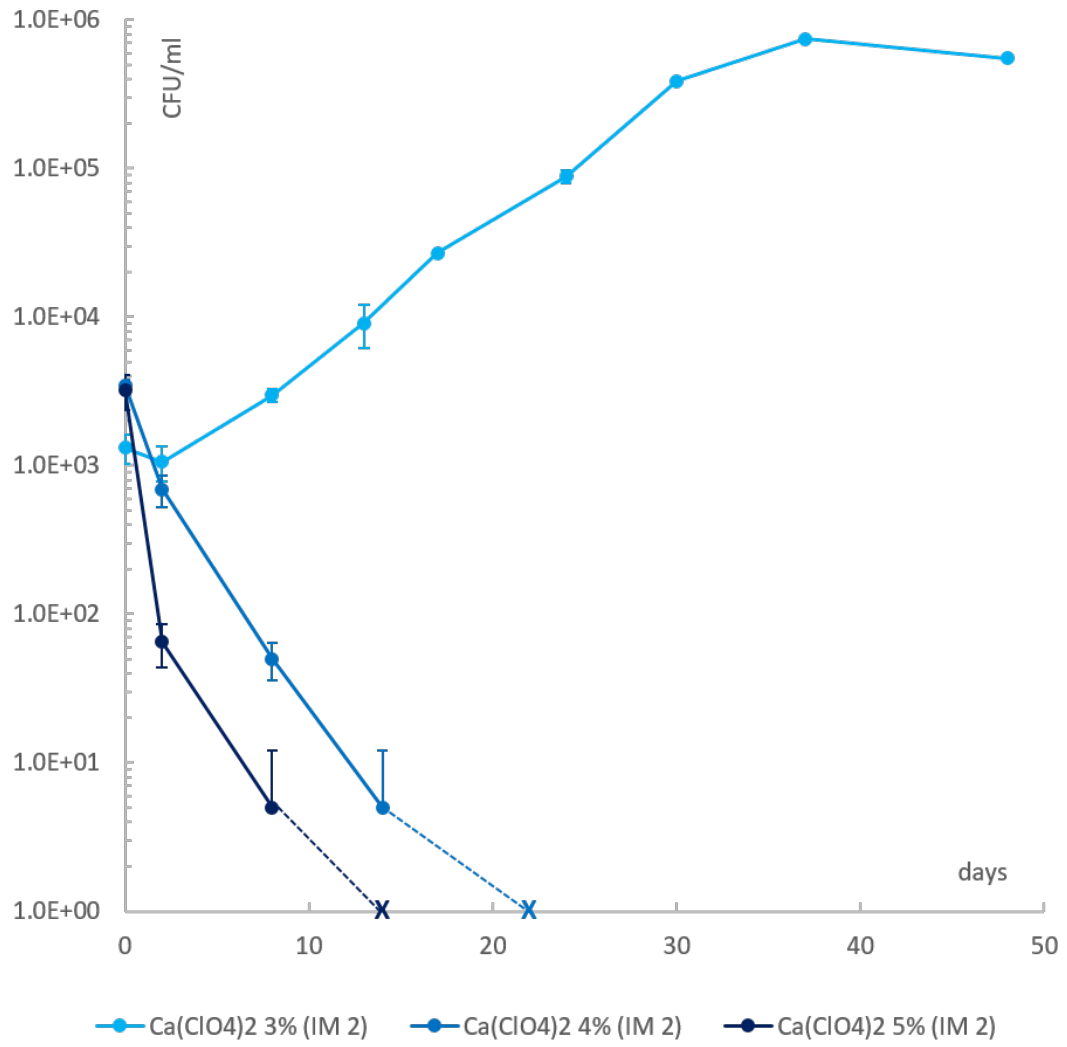


FIG. S12: Growth curves in Ca(ClO₄)₂ containing media at 4°C.

2. Ionic strengths and water activities at the MSCg (additionally to Fig. 2 in the main text)

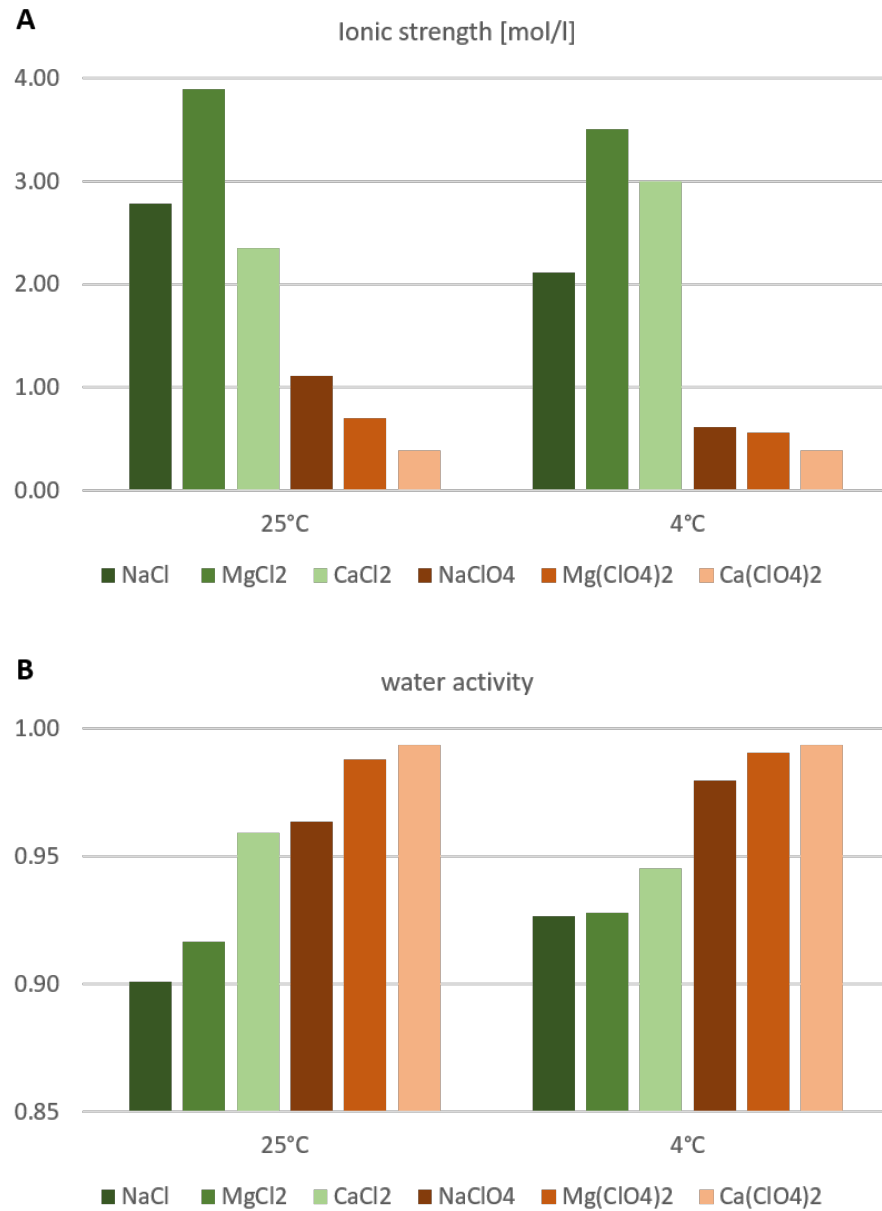


FIG. S13: Ionic strengths (**A**) and water activities (**B**) at the MSCg. See also Table 1 and Fig. 2 in the main text.

3. Cell colony morphologies of *P. halocryophilus* grown under salt stress conditions (additionally to Fig. 4 in the main text)

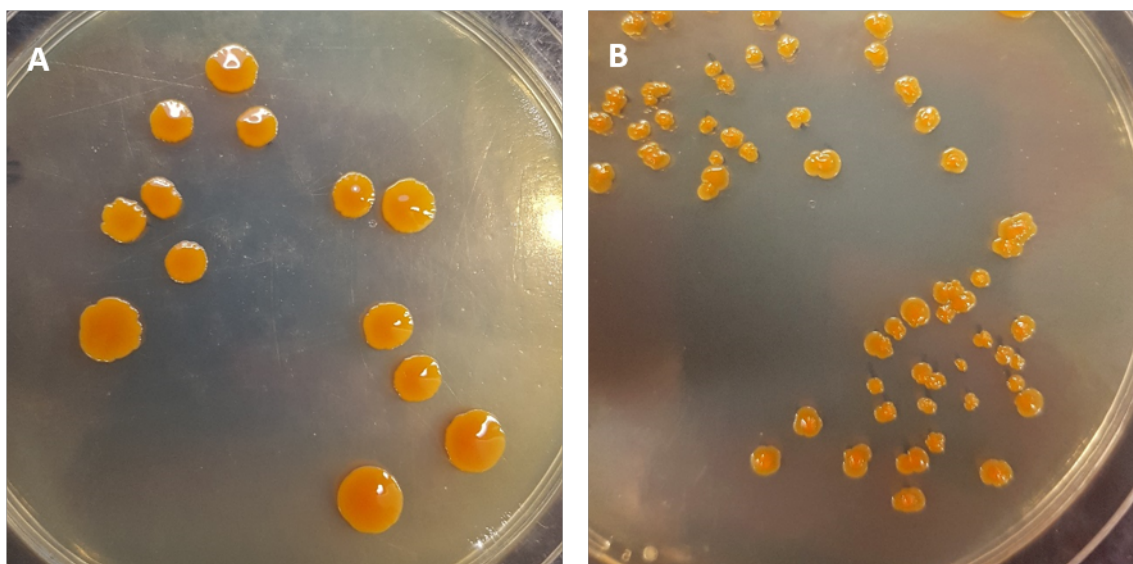


FIG. S14: Irregular jagged colonies (type III) of *P. halocryophilus* occurring after bacterial growth in medium containing 9 wt% MgCl_2 (A) or 4 wt% $\text{Mg}(\text{ClO}_4)_2$ (B).

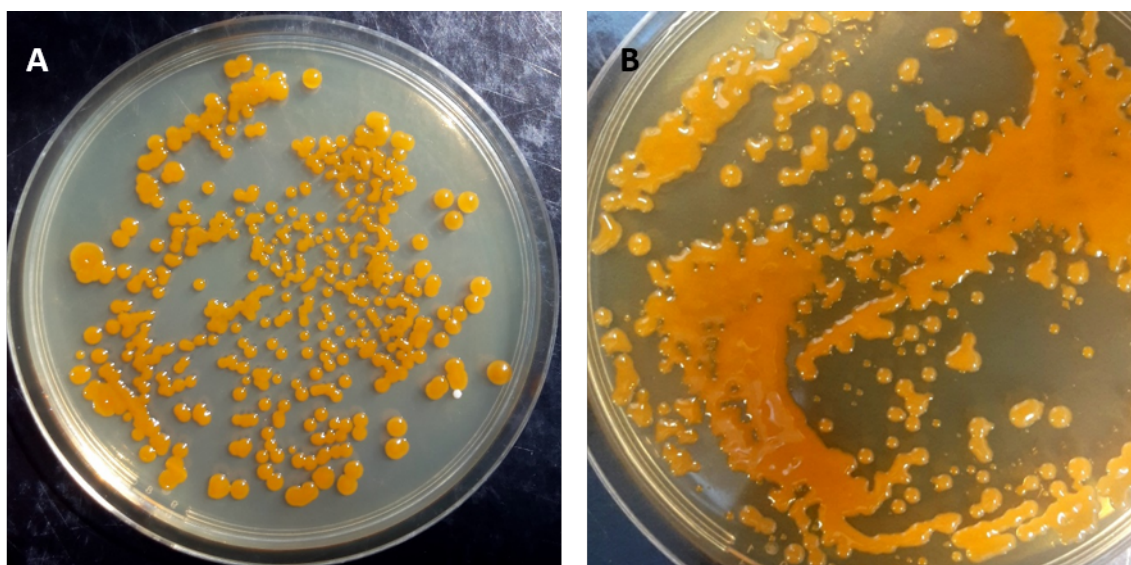


FIG. S15: Mucooid and shiny colonies (type IV) that merge easily during colony growth occurring after bacterial growth in medium containing 6 wt% CaCl_2 (A) or 8 wt% CaCl_2 (B).

4. Fluorescence microscopy images (additionally to Fig. 5 in the main text)

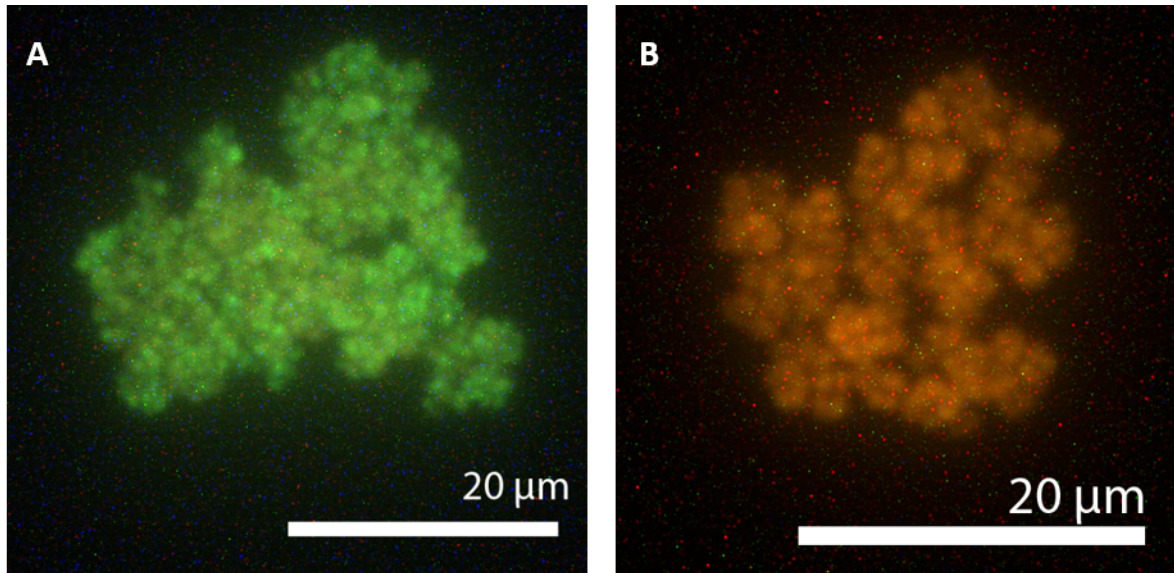


FIG. S16: Fluorescence microscopy images (after life/dead staining) of cell clusters of *P. halocryophilus* in 10 wt% NaClO₄ medium before **(A)** and after **(B)** killing all cells within one cluster through ethanol treatment.