

Cell lysis is induced in *Schizosaccharomyces pombe* Δ *ura4* cells grown in YPD medium, which contains yeast extract, polypeptone, and glucose. To identify the medium components that induce cell lysis, we first tested various kinds of yeast extracts from different suppliers. Cell lysis of Δ *ura4* cells on YE medium was observed when yeast extracts from OXOID, BD, Oriental, and Difco were used, but not when using yeast extract from Kyokuto. To determine which compounds induced cell lysis, we subjected yeast extract and polypeptone to GC-MS analysis. Ten kinds of compounds were detected in OXOID and BD yeast extracts, but not in Kyokuto yeast extract. Among them was urea, which was also present in polypeptone, and it clearly induced cell lysis. Deletion of the *ure2* gene, which is responsible for utilizing urea, abolished the lytic effect of urea. The effect of urea was suppressed by deletion of *pub1*, and a similar phenotype was observed in the presence of polypeptone. Thus, urea is an inducer of cell lysis in *S. pombe* Δ *ura4* cells.

Urea enhances cell lysis of *Schizosaccharomyces pombe* *ura4* mutants.

