

Table 1.1 Classes and examples of extremophilic prokaryotes

Physicochemical factor	Descriptive term	Genus/species	Lineage	Habitat	Minimum	Optimum	Maximum	Reference
Temperature	High	<i>Pyrolobus fumarii</i>	Archaea	Hydrothermal	90 °C	106 °C	113 °C	Blöchl et al. (1997)
	High	Strain 121	Archaea	Black smoker	85 °C	?	121 °C	Kashefi and Lovley (2003)
	High	<i>Methanopyrus kandleri</i> strain 116	Archaea	Black smoker fluid	90 °C	105 °C	122 °C	Takai et al. (2008)
Low	Psychrophile	Permafrost bacteria	Bacteria	Siberian Permafrost	−20 °C	?	5 °C	Rivkina et al. (2000)
pH low	Acidophile	<i>Picrophilus oshimae</i>	Archaea	Acidic hot spring	pH −0.06	pH 0.7	pH 4	Schleper et al. (1995)
	"	<i>Ferroplasma acidarmanus</i>	Archaea	Acid mine drainage	pH 0	pH 1.2	pH 2.5	Edwards et al. (2000)
pH high	Alkaliphile	<i>Alkaliphilus transvaalensis</i>	Bacteria	Deep gold mine	pH 8.5	pH 10	pH 12.5	Takai et al. (2001)
Hydrostatic pressure	Piezophile	<i>Moritella yayanosii</i>	Bacteria	Ocean sediment	50 MPa	70 MPa	110 MPa	Nogi and Kato (1999)
	Piezophile	<i>Pyrococcus</i> CH1	Archaea	Black Smoker	20 MPa	52 MPa	120 MPa	Zeng et al. (2009)
Salt (NaCl)	Halophile	<i>Halobacterium salinarum</i>	Archaea	Saltern	15 % NaCl	25 % NaCl	32 % NaCl	Grant et al. (2001)
Water activity	Xerophile	<i>Xeromyces bisporus</i>	Fungus	Moldy fruit	a_w 0.61	a_w 0.82	a_w 0.92	Hocking and Pitt (1999)
	"	Halophiles	Archaea, Bacteria	Brines	a_w 0.611	a_w 0.755	a_w < 0.9	Stevenson et al. (2015)

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