

***Acidithiobacillus ferriphilus* sp. nov.: a facultatively anaerobic iron- and sulfur-metabolising extreme acidophile**

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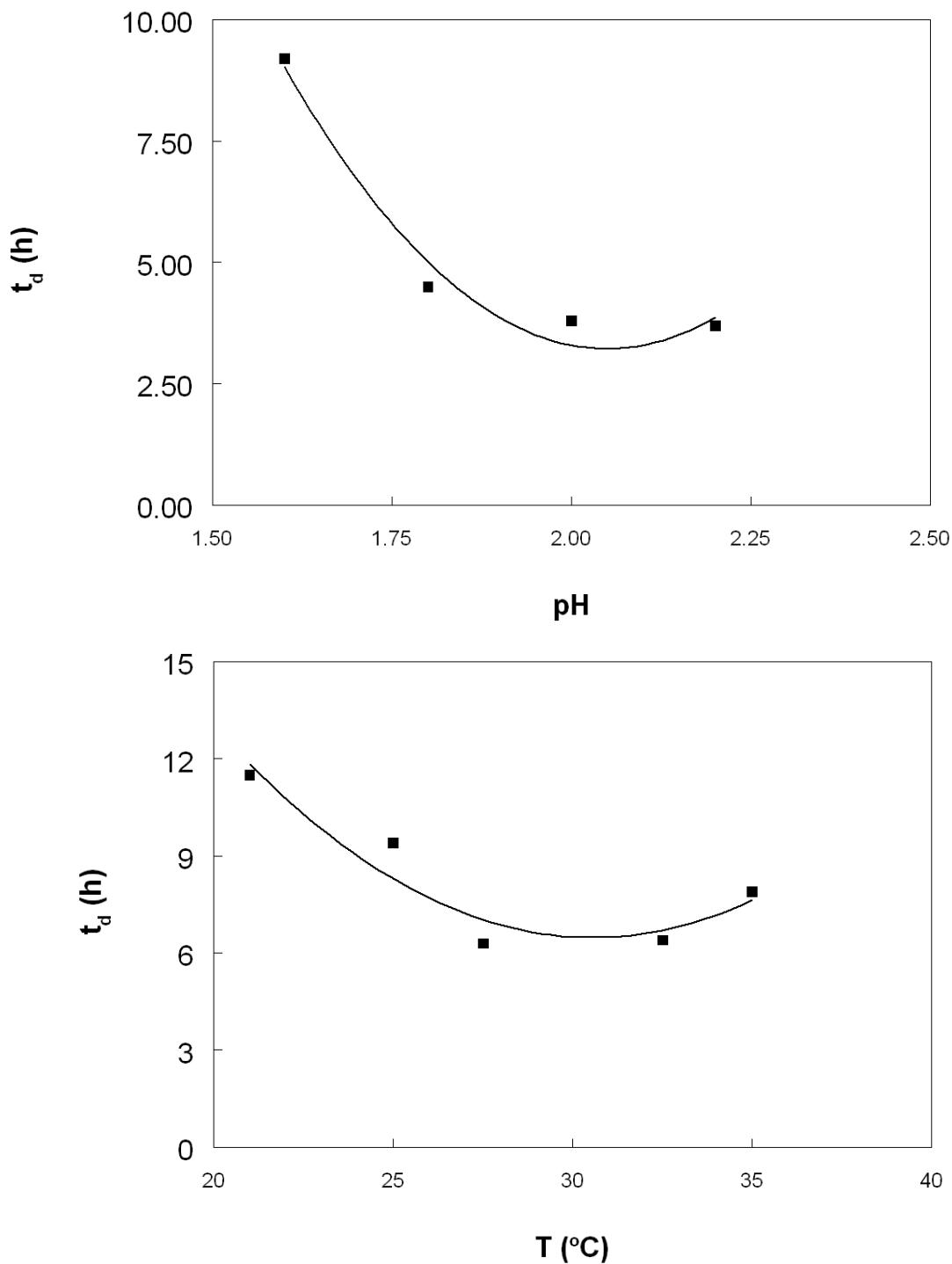
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**Supplementary files**

**Supplementary Table 1.** Physiological characteristics of strains of *A. ferriphilus*

| Strain           | Oxidation of |                  |    |                               | Reduction of | Growth on |                |    | Growth at |     |      |      |                  |         |        |
|------------------|--------------|------------------|----|-------------------------------|--------------|-----------|----------------|----|-----------|-----|------|------|------------------|---------|--------|
|                  | Fe(II)       | FeS <sub>2</sub> | S° | S <sub>4</sub> O <sub>6</sub> |              | Fe(III)   | H <sub>2</sub> | YE | Glycerol  | 5°C | 10°C | 33°C | 35°C             | pH 1.25 | pH 1.5 |
| M20 <sup>T</sup> | +            | +                | +  | +                             | +            | -         | -              | -  | +         | +   | +    | -    | -                | -       | +      |
| JCM 7812         | +            | +                | +  | +                             | +            | -         | -              | -  | -         | +   | +    | -    | -                | -       | -      |
| Malay            | +            | +                | +  | +                             | +            | -         | -              | -  | +         | +   | +    | -    | -                | -       | +      |
| Riv13            | +            | +                | +  | +                             | +            | -         | -              | -  | -         | +   | +    | -    | -                | -       | +      |
| ST2              | +            | +                | +  | +                             | +            | -         | -              | -  | +         | +   | +    | -    | -                | -       | +      |
| PS102            | +            | +                | +  | +                             | +            | -         | -              | -  | -         | ±   | +    | -    | -                | -       | +      |
| PS104            | +            | +                | +  | +                             | +            | -         | -              | -  | -         | ±   | +    | +    | - (+ at pH 1.35) | +       | +      |
| PS107            | +            | +                | +  | +                             | +            | -         | -              | -  | -         | ±   | -    | -    | -                | -       | +      |
| KCT10            | +            | +                | +  | +                             | +            | -         | -              | -  | -         | ±   | ±    | -    | -                | -       | +      |
| KCT14            | +            | +                | +  | +                             | +            | -         | -              | -  | -         | +   | -    | -    | -                | -       | -      |
| KCT17            | +            | +                | +  | +                             | +            | -         | -              | -  | -         | ±   | -    | -    | -                | -       | +      |

Growth was assessed by monitoring cell numbers, and oxidation/reduction of iron or acid-production (sulfur cultures)



**Supplementary Fig. 1.** The effect of (top) pH, and (bottom) temperature on mean generation times ( $t_d$ ) of strain M20<sup>T</sup>. Each data point represents a  $t_d$  value obtained from a series of data obtained for each condition used