Supplementary Data S1:

Composition of MDS3 medium

The chemically defined medium MDS3, developed to study phosphite and phosphate uptake and assimilation was developed on the basis of the medium described initially for the isolation of *Pseudomonads* from Stanier and co-authors in 1966 [1]. This medium had undergone several modifications, where the most popular one was that from Palleroni and co-authors [2]. A modified Palleroni’s medium was used from Freese during the isolation of bacterial strains from the guts of *D. magna* (unpublished). Further the medium has been adjusted for the needs of the phosphite/phosphonate assimilation assays, by Simeonova [3].

**Ingredients and preparation:**

20mM Tris-HCl, pH: 7.0-7.2; Alternatively, MOPS or HEPES buffer can be used as well.

**Solution 1 (in g l\(^{-1}\)):** MgSO\(_4\).7H\(_2\)O - 0.12; NH\(_4\)Cl - 0.27; KCl - 0.5; NaCl - 1.0; prepared as 10x stock solution and autoclaved at 121°C for 25 min;

**Solution 2:** CaCl\(_2\).6H\(_2\)O - 0.132g in 10 ml ddH\(_2\)O, autoclaved at 121°C for 25 min;

**SL10 Solution [4]:** Trace Elements Solution 10;

**7 Viamine Solution [5]** - filter sterilized;

**MDS3 preparation (1l):** Tris-HCl buffer (10x stock) – 100 ml;

Solution 1 (10x stock) – 100 ml;

Solution 2 - 0,1 ml;
Trace Elements Solution 10 - 1 ml;

7 Vitamins Solution 10 - 1 ml;

q.s.p. with autoclaved doubly distilled H₂O to 1l.

As a single phosphorus source 0.1 to 1mM phosphite or phosphate were supplemented into the MDS3. Glucose 10mM was used as a carbon source.

The medium is suitable for analogous studies with organophosphonates, since it does not include any phosphorus containing chemicals.

References: