

Supplementary material Physico–chemical parameters from the sampling sites where *Fragilaria candidagilae* sp. nov. was present with a relative abundance over 1%.

Site	Botão	Brasfemes	Sta Marinha	Benémola	Jusante	Espargal	Tôr	Foz de Besteiros	Foz do Carvalhoso	Zambujeira
Watercourse	Ribeira do Botão	Ribeira do Botão	Rio Resmungão	Sta Mariña (Mos)	Ribeira da Fonte Menalva	Ribeira de Algibre	Ribeira de Algibre	Ribeira de Seixe	Ribeira de Seixe	Ribeira de Seixe
Hydrographic Basin	Mondego	Mondego	Mondego	Douro	Ribeiras do Algarve	Ribeiras do Algarve	Ribeiras do Algarve	Ribeiras do Algarve	Ribeiras do Algarve	Ribeiras do Algarve
Sampling date	4/6/2011	2/13/2012	2/13/2012	7/25/2007	03/03/2006	4/17/2006	3/2/2006	4/16/2006	4/15/2006	4/16/2006
Latitude	40° 18' 54.6" N	40° 18' 54.6" N	40°16' 56.0" N	41°07' 41.596" N	37° 11' 52.751" N	37° 11' 12.845" N	37° 11' 24.003" N	37° 23' 23.372" N	37° 22' 17.900" N	37° 23' 37.424" N
Longitude	08° 23' 02.6" W	08° 23' 02.6" W	8°24' 24" W	06° 54' 59.729" W	08° 00' 15.051" W	08° 05' 16.668" W	08° 00' 37.398" W	08° 39' 16.011" W	08° 38' 27.886" W	08° 43' 54.700" W
Altitude (m a.s.l.)	86.0	86.0	11.0	300.0	130.0	96.3	118.0	69.9	97.5	18.0
Catchment area (km²)	18.1	18.1		49.6	91.9	185.1	133.6	107.6	39.0	165.2
Current velocity (m s⁻¹)	0.2	0.1	0.1	0.6	0.4	1.2	0.6	1.1	1.1	1.2
Water temperature (°C)	14.6	3.8	7.4	20.4	14.7	17.2	13.3	16.0	17.4	17.7
Conductivity (mS cm⁻¹)	168.1	215.0	167.4	89.9	192.2	246.0	457.0	166.3	138.8	185.6
pH	7.5	7.7	7.8	7.0	7.2	7.9	8.3	7.1	7.1	7.1
OD (% sat)	105.7	94.0	93.3	73.9	66.1	79.2	77.1	71.2	74.4	67.2
OD (mg L⁻¹)	10.8	12.5	11.4	6.5	6.6	7.4	8.0	7.0	7.0	6.8
Hardness (mg CaCO₃ L⁻¹)	75.5	97.5	62.1	46.0	102.0	80.5	194.0	51.0	70.0	96.5
Ammonium (mg L⁻¹)	<0.39	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nitrates (mg L⁻¹)	0.6	0.8	1.5	0.1	0.1	0.1	0.3	0.1	0.2	0.2
Nitrites (mg L⁻¹)	<0.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phosphates (mg P L⁻¹)	0.3	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sulphates (mg SO₄ L⁻¹)	<0,7	6.3	0.4	5.9	9.1	5.3	58.0	6.6	8.8	17.3
Chlorides (mg L⁻¹)	16.5	19.7	23.7	4.0	17.4	23.8	24.3	19.1	19.8	18.4
Alkalinity (mg CaCO₃ L⁻¹)	110.2	90.9	48.6	28.0	33.0	51.0	116.0	45.0	42.0	40.0
Total P (mg P L⁻¹)	0.5	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Silica (mg SiO₂ L⁻¹)	8.2	8.2	6.5	0.8	0.4	1.4	3.5	0.2	0.3	0.4