

**Table S1:** Phytoplankton genera/species appeared at the sampling stations during the sampling period in the Yeongsan River estuary.

Functional Group	Genera/Species	St. A	St. B	St. C
Bacillariophyta (Diatoms)	<i>Asterionella formosa</i>	+	+	+
	<i>Acanthoceras zachariasii</i> (formerly <i>Attheya zachariasii</i> )		+	
	<i>Aulacoseira</i> sp.	+	+	
	<i>Chromulina</i> sp.	+		
	<i>Cocconeis placentula</i>	+		+
	<i>Coscinodiscus</i> sp.	+		
	<i>Stephanocyclus meneghinianus</i> (formerly <i>Cyclotella meneghiniana</i> )	+	+	+
	<i>Discostella stelligera</i> (formerly <i>Cyclotella stelligera</i> )	+	+	+
	<i>Cylindrotheca</i> sp.	+		
	<i>Encyonema leibleinii</i> (formerly <i>Cymbella prostrata</i> )		+	
	<i>Cymbella tumida</i>	+	+	+
	<i>Fragilaria capucina</i>			+
	<i>Fragilaria construens</i>	+		
	<i>Fragilaria crotonensis</i>	+		
	<i>Leptocylindrus</i> sp.	+	+	+
	<i>Melosira</i> sp.	+	+	
	<i>Melosira varians</i>		+	
	<i>Navicula</i> sp.	+	+	+
	<i>Nitzschia acicularis</i>	+	+	+
	<i>Nitzschia holsatica</i>	+		
	<i>Nitzschia palea</i>	+		+
	<i>Nitzschia sigma</i>	+	+	
	<i>Nitzschia socialis</i>	+		
	<i>Nitzschia</i> sp.	+	+	+
	<i>Oocystis</i> sp.	+		+
	<i>Pleurosigma fasiola</i>	+		
	<i>Stephanodiscus</i> sp.	+	+	+
	<i>Synedra acus</i>	+	+	+
	<i>Synedra ulna</i>	+	+	
	<i>Thalassiosira eccentrica</i>	+	+	
	<i>Thalassiosira</i> sp.	+	+	+
	<i>Actinastrum hantzschii</i>	+	+	
	<i>Ankistrodesmus fusiformis</i>		+	
	<i>Chlamydomonas angulosa</i>			+
	<i>Chlorogonium euchlorum</i>			+
	<i>Coelastrum microporum</i>	+	+	+
	<i>Coronastrum lunatum</i>			+
	<i>Cosmarium</i> sp.			+
	<i>Dictyosphaerium pulchellum</i>	+	+	+
Chlorophytes	<i>Gloeocystis qiqas</i>		+	
	<i>Koliella longiseta</i>		+	
	<i>Micractinium pusillum</i>	+		
	<i>Monoraphidium contortum</i>	+	+	+
	<i>Oocystis borgei</i>		+	
	<i>Oocystis</i> sp.	+	+	+
	<i>Pandorina morum</i>	+		
	<i>Pediastrum duplex</i>		+	
	<i>Pediastrum duplex Meyen</i>		+	+

	<i>Scenedesmus acuminatus</i>	+	+	+
	<i>Scenedesmus ecornis</i>			+
	<i>Scenedesmus opoliensis</i>	+	+	
	<i>Scenedesmus quadricauda</i>	+		
	<i>Tetrastrum</i> sp.			+
	<i>Volvox carteri</i>			+
	<i>Anabaena</i> sp.			+
	<i>Cryptomonas</i> sp.	+		
Cyanobacteria (blue-green algae)	<i>Merismopedia punctata</i>			+
	<i>Merismopedia</i> sp.	+		
	<i>Microcystis aeruginosa</i>	+	+	+
	<i>Microcystis</i> sp.			+
	<i>Microcystis wesenbergii</i>	+		
	<i>Chroomonas</i> spp.	+	+	+
Cryptista/Cryptophyceae (cryptophytes)C	<i>Teleaulax acuta</i> (formerly <i>Cryptomonas acuta</i> )	+	+	+
	<i>Cryptomonas erosa</i>	+	+	+
	<i>Cryptomonas</i> sp.	+	+	+
	<i>Alexandrium</i> sp.			+
	<i>Aulacoseira granulata</i>	+	+	
	<i>Aulacoseira</i> sp.			+
	<i>Chromulina</i> sp.	+		
	<i>Closterium gracile</i>	+		
	<i>Euglena agilis</i>	+		
	<i>Euglena oxyuris</i>	+	+	
Other groups	<i>Euglena</i> sp.	+	+	+
	<i>Melosira</i> sp.	+	+	+
	<i>Melosira varians</i>		+	+
	<i>Phacus</i> sp.	+	+	+
	<i>Stauroastrum</i> sp.	+		
	<i>Stephanoptera gracilis</i>			+
	<i>Synura petersenii</i>	+		+
	<i>Trachelomonas</i> sp.	+	+	+

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