**Table S1.** Spearman's rho correlation coefficients between organic carbon (DOC and POC) and dissolved carbohydrates (dCHOTOTAL and dCHO>8kDa), dEPS fractions (dEPS*complex*, dEPS*50* and dEPS), dissolved uronic acids (dUA) and UA present in the EPS fraction (dEPS UA), total particulate carbohydrates (pCHO = pCHOHW + pCHOHB + pCHOHA + pCHOR) and individual particulate carbohydrate fractions (pCHOHW, pCHOHB, pCHOHA, pCHOR). Number of samples are given in parenthesis, values in bold are significant at *\** p< 0.05*, \*\** p< 0.01 or *\*\*\** p< 0.001.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Sea ice 2010 (n =13)** | | | | **Sea ice 2011 (n =23)** | | | | |
| **POC** | **DOC** | **pCHO** | **dCHOTOTAL** | **POC** | **DOC** | **pCHO** | **dCHOTOTAL** |
| **POC** |  |  |  |  |  |  |  |  |
| **DOC** | **0.736\*\*** |  |  |  |  |  |  |  |
| **dCHOTOTAL** | **0.830\*\*** | **0.896\*\*** |  |  | **0.795\*\*** | **0.646\*\*** | **0.637\*\*** |  |
| **dCHO>8kDa** | **0.830\*\*** | **0.791\*\*** | 0.511 | **0.863\*\*** | **0.657\*\*** | **0.698\*\*** | **0.550\*\*** | **0.764\*\*** |
| **dEPS*complex*** | **0.853\*\*** | **0.657\*** | 0.303 | **0.729\*\*** | **0.394** | **0.212** | 0.116 | **0.253** |
| **dEPS50** | **0.802\*\*** | **0.692\*\*** | 0.269 | **0.725\*\*** | **0.640\*\*** | **0.592\*\*** | **0.609\*\*** | **0.618\*\*** |
| **dEPS** | **0.725\*\*** | **0.615\*\*** | 0.231 | **0.720\*\*** | **0.540\*\*** | **0.496\*** | **0.481\*** | **0.467\*** |
| **dUA** | **0.725\*\*** | **0.731\*\*** | 0.390 | **0.813\*\*** | **0.668\*\*** | **0.726\*\*** | **0.58388** | **0.726\*\*** |
| **dEPSUA** | 0.509 | **0.792\*\*** | **0.682\*** | **0.781\*\*** | **0.707\*\*** | **0.625\*\*** | **0.654\*\*** | **0.639\*\*** |
| **pCHO** | 0.418 | **0.742\*\*** | - | **0.610\*** | **0.671\*\*** | **0.743\*\*** | - | **0.637\*\*** |
| **pCHOHW** | 0.511 | **0.731\*\*** | **0.951\*\*** | **0.709\*\*** | **0.622\*\*** | **0.728\*\*** | **0.937\*\*** | **0.649\*\*** |
| **pCHOHB** | 0.418 | **0.742\*\*** | **1.00\*\*\*** | **0.610\*** | **0.650\*\*** | **0.782\*\*** | **0.790\*\*** | **0.647\*\*** |
| **pCHOHA** | 0.291 | **0.687\*\*** | **0.967\*\*** | 0.527 | **0.592\*\*** | **0.616\*\*** | **0.799\*\*** | **0.545\*\*** |
| **pCHOR** | 0.385 | **0.769\*\*** | **0.769\*\*** | **0.648\*** | **0.613\*\*** | **0.467\*** | **0.623\*\*** | **0.578\*\*** |