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# Characterising the stable $\delta$88/86Sr isotopic composition in rainwater, southwestern Taiwan

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Radiogenic and stable Sr isotopes provide important information on chemical wreathing. However, our knowledge on the characteristic of stable Sr isotopes of rainwater, the major source of river water, is limited. More than 300 rainwater samples were collected manually and their major, trace elements, $\delta$D, $\delta$18O, 87Sr/86Sr, and $\delta$88Sr were determined. Two major moisture sources are differentiated based on the seasons and d-excess value, namely polar continental air mass (Pc; winter) and equatorial maritime air mass (Em; summer). The stable Sr isotopes show large variations (0.10 to 0.39 ‰ compared to other studied materials such as rocks, river water, seawater, carbonates and so on. Pc has $\delta$88Sr distributed between 0.10 and 0.29 ‰ distinguishable and slightly lower than Em, which is distributed between 0.18 and 0.39 ‰The $\delta$88Sr values of Pc samples show moderate correlations with $\delta$D, $\delta$18O, 87Sr/86Sr, Na/Sr ratio, and Sr concentration. On the other hand, Em samples show no correlation with those factors. In summary, Em samples may be contributed by sea-salt and various local signals while Pc samples show stronger lithological signal which is contributed by long range transport dusts.