

## Organic matter cycling along geochemical, geomorphic and disturbance gradients in vegetation and soils of African tropical forests and cropland - Project TropSOC DATABASE\_v1.0

### 2.1.4. Forest – Vegetation – Fresh leaves chemistry aggregated at species level

When using these data, please cite the original publication:

Doetterl S., Asifiwe R.K., Baert G., Bamba F., Bauters M., Boeckx P., Bukombe B., Cadisch G., Cizungu L.N., Cooper M., Hoyt A., Kabaseke C., Kalbitz K., Kidinda L., Maier A., Mainka M., Mayrock J., Muhindo D., Mujinya B.B., Mukotanyi, S.M., Nabahunu L., Reichenbach M., Rewald B., Six J., Stegmann A., Summerauer L., Unseld R., Vanlauwe B., Van Oost K., Verheyen K. Vogel C., Wilken F., Fiener P. Organic matter cycling along geochemical, geomorphic and disturbance gradients in forests and cropland of the African Tropics - Project TropSOC Database Version 1.0. *Earth System Science Data* XXX, DOI XXX, 2021.

#### Introduction

The dataset comprises a unique plot identifier and tree species names, followed by 22 variables that describe the chemical properties of living canopy leaves aggregated at the species level. Missing values are indicated by -9999.

#### Data structure

No.	Variable	Explanation	Unit
1	plotID	unique identifier of each plot and point where data were collected	-
2	species	species of tree	-
3	mean_N	mean nitrogen in sampled fresh leaves	%
4	sd_N	standard deviation of mean nitrogen in sampled fresh leaves	%
5	mean_C	mean carbon in sampled fresh leaves	%
6	sd_C	standard deviation of mean carbon in sampled fresh leaves	%
7	mean_Al	mean aluminium in sampled fresh leaves	mg kg <sup>-1</sup>
8	sd_Al	standard deviation of mean aluminium in sampled fresh leaves	mg kg <sup>-1</sup>
9	mean_Ca	mean calcium in sampled fresh leaves	mg kg <sup>-1</sup>
10	sd_Ca	standard deviation of mean calcium in sampled fresh leaves	mg kg <sup>-1</sup>
11	mean_Fe	mean iron in sampled fresh leaves	mg kg <sup>-1</sup>
12	sd_Fe	standard deviation of mean iron in sampled fresh leaves	mg kg <sup>-1</sup>
13	mean_K	mean potassium in sampled fresh leaves	mg kg <sup>-1</sup>
14	sd_K	standard deviation of mean potassium in sampled fresh leaves	mg kg <sup>-1</sup>
15	mean_Mg	mean magnesium in sampled fresh leaves	mg kg <sup>-1</sup>
16	sd_Mg	standard deviation of mean magnesium in sampled fresh leaves	mg kg <sup>-1</sup>
17	mean_Mn	mean manganese in sampled fresh leaves	mg kg <sup>-1</sup>
18	sd_Mn	standard deviation of mean manganese in sampled fresh leaves	mg kg <sup>-1</sup>
19	mean_Na	mean sodium in sampled fresh leaves	mg kg <sup>-1</sup>
20	sd_Na	standard deviation of mean sodium in sampled fresh leaves	mg kg <sup>-1</sup>
21	mean_P	mean phosphorous in sampled fresh leaves	mg kg <sup>-1</sup>
22	sd_P	standard deviation of mean phosphorous in sampled fresh leaves	mg kg <sup>-1</sup>
23	mean_Si	mean silicon in sampled fresh leaves	mg kg <sup>-1</sup>
24	sd_Si	standard deviation of mean silicon in sampled fresh leaves	mg kg <sup>-1</sup>

**Methods**

This aggregated dataset is based on the fresh leaf dataset with values for individual canopy leaves (*213\_fresh\_leaves.csv*). Details regarding the sampling and analysis are given in *213\_fresh\_leaves.pdf*. The aggregation done for the presented canopy leaf data is done on the species level within each forest plot.

**Acknowledgment**

TropSOC was funded via the Emmy-Noether-Program of the German Research Foundation (project ID 387472333).