The Effect of Filtration by Ginkgo Charcoal

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Research Improvements

Experimental conditions

Water used(mg/L)

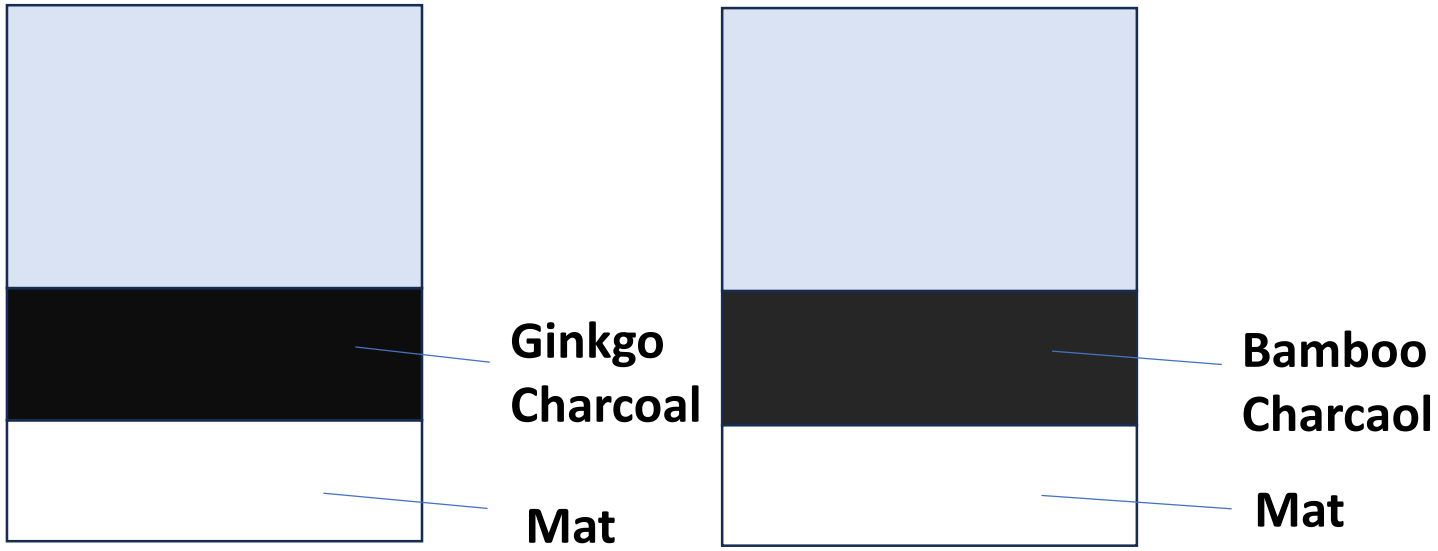
Ammonium	0～0.5
nitric acid	0～1
COD	13~20

（Experimental method of ginkgo charcoal pickling, including explanation of ginkgo biloba）

Gingko: A tall tree of gymnosperms that is deciduous. A tree that symbolizes our school.

In this experiment, water was filtered through ginkgo charcoal to purify it.

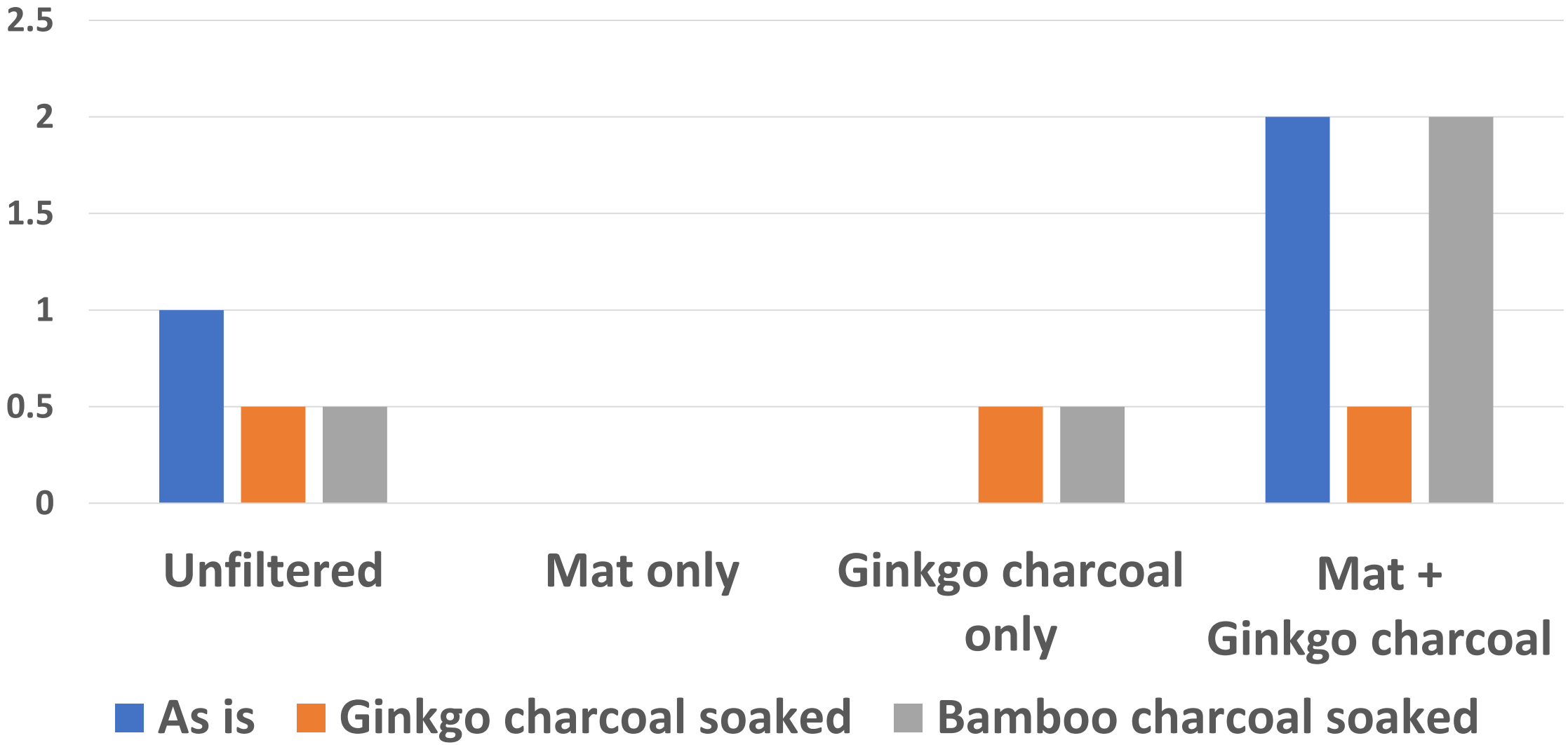
In addition, we use commercially available deodorizing bamboo charcoal as a comparison object.



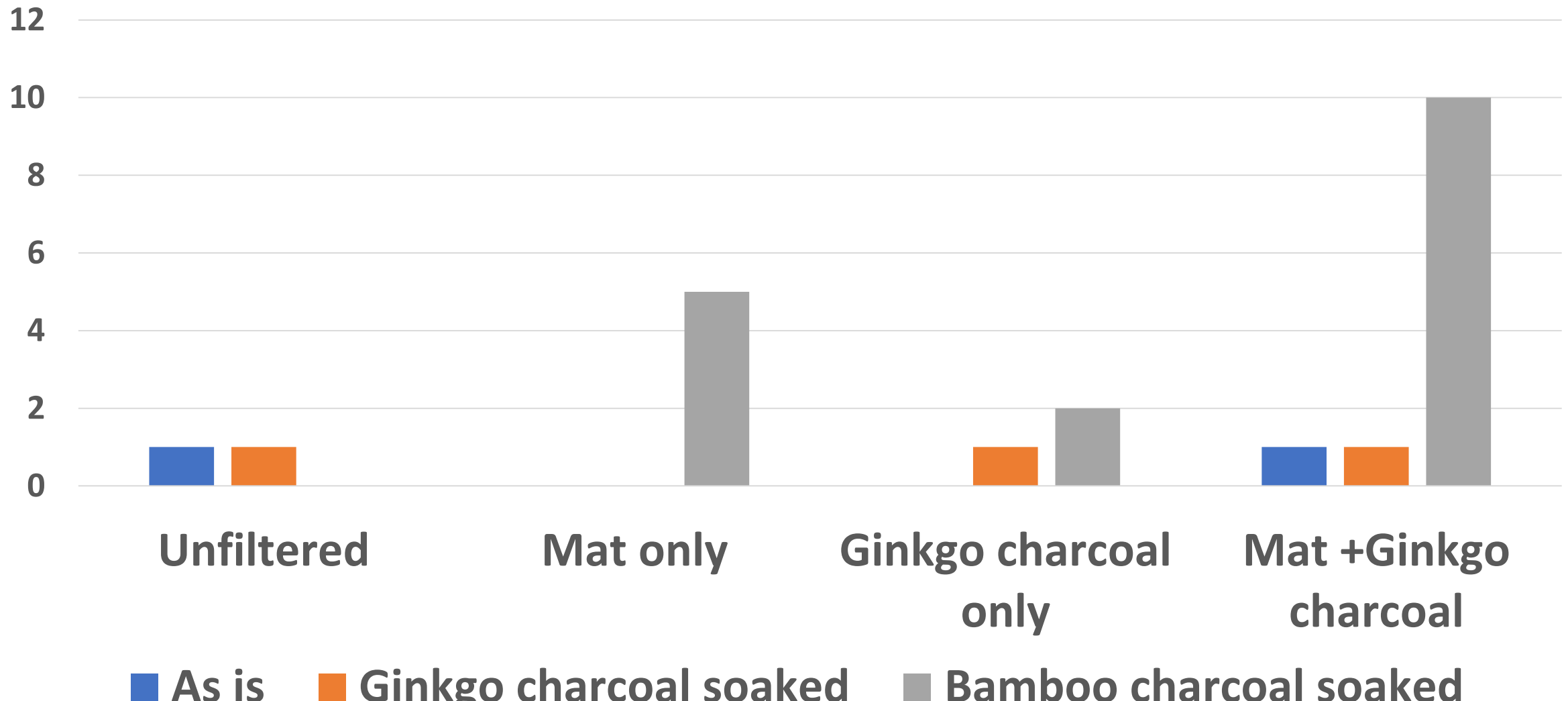
Ginkgo charcoal

filtration status

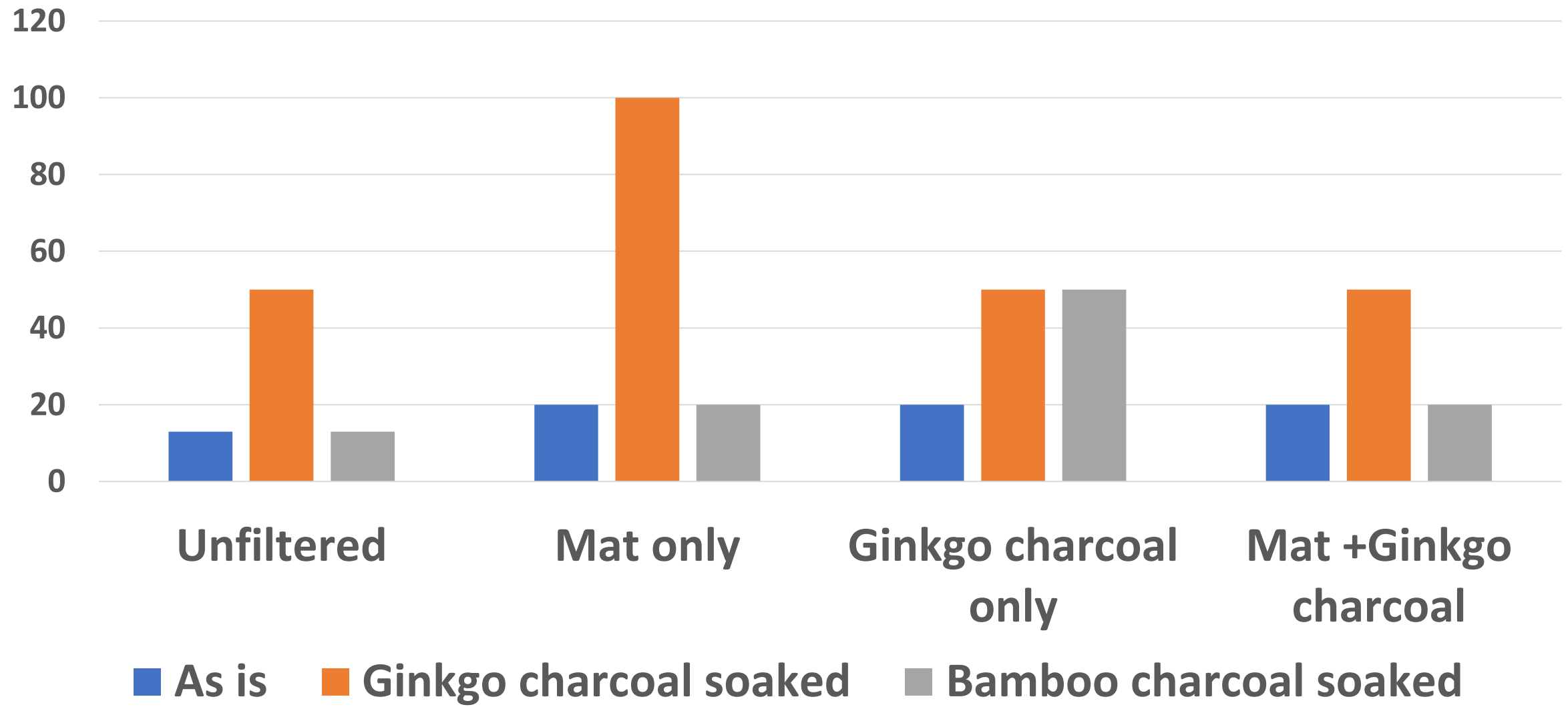
Ammonium

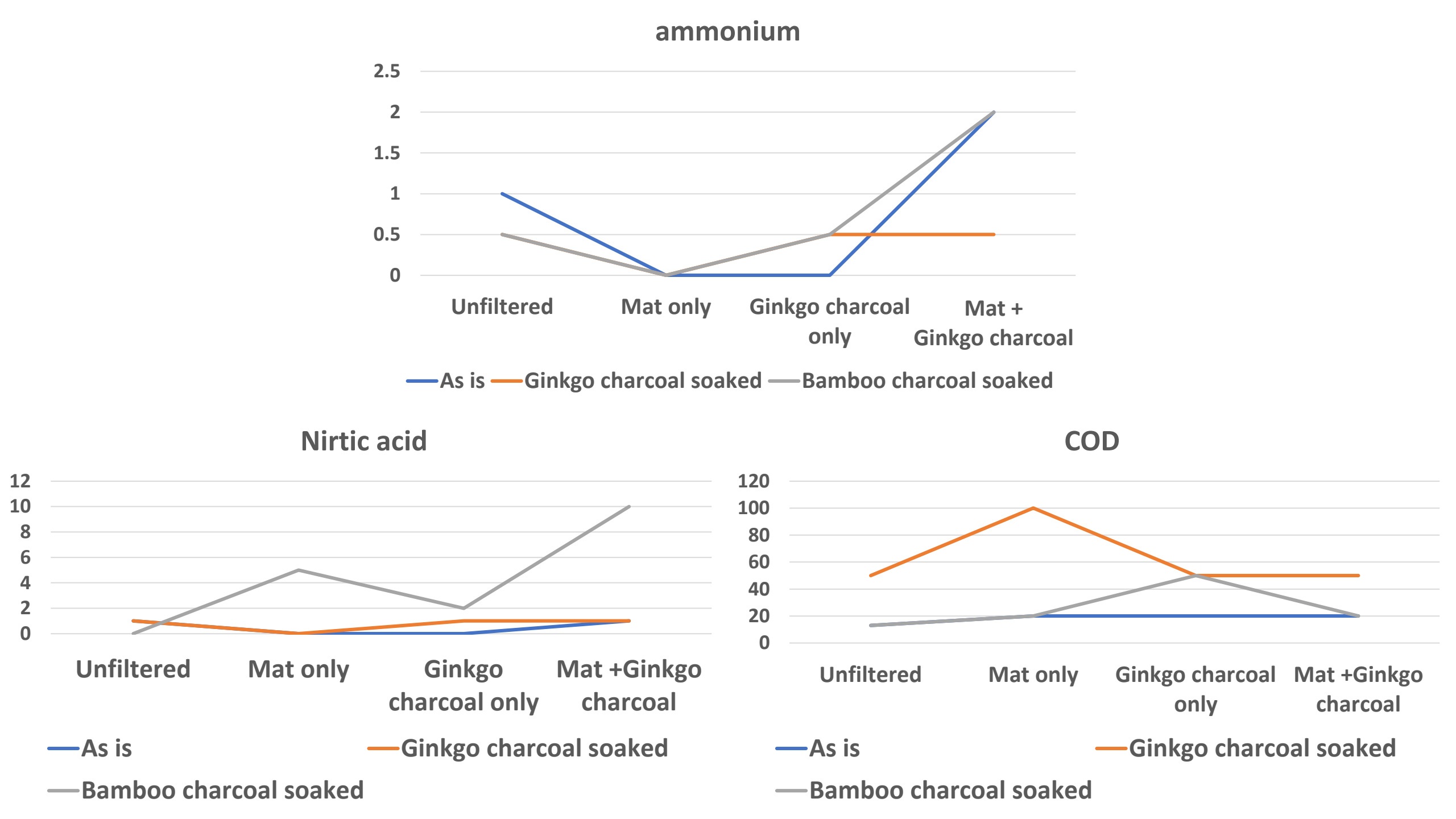

2.5
2
1.5
1
0.5
0
Unfiltered
Mat only
Ginkgo charcoal only
Mat + Ginkgo charcoal
As is
Ginkgo charcoal soaked
Bamboo charcoal soaked

Nitric acid


12
10
8
6
4
2
0
Unfiltered
Mat only
Ginkgo charcoal only
Mat +Ginkgo charcoal
As is
Ginkgo charcoal soaked
Bamboo charcoal soaked

Chemical Oxygen Demand（COD）




ammonium
2.5
2
1.5
1
0.5
0
Unfiltered
Mat only
Ginkgo charcoal only
Mat + Ginkgo charcoal
As is
Ginkgo charcoal soaked
Bamboo charcoal soaked
Nirtic acid
12
10
8
6
4
2
0
Unfiltered
Mat only
Ginkgo charcoal only
Mat +Ginkgo charcoal
As is
Ginkgo charcoal soaked
Bamboo charcoal soaked
COD
120
100
80
60
40
20
0
Unfiltered
Mat only
Ginkgo charcoal only
Mat +Ginkgo charcoal
As is
Ginkgo charcoal soaked
Bamboo charcoal soaked

According to these results

- **There was no significant change in ammonium or nitric acid**

→The adsorption power was small due to the large charcoal fragments and the small surface area.

- **Reasons for the increase in COD**

→When the ginkgo tree was turned into charcoal, the oxygen inside did not burn completely.

What to do from now on

- **Crush the ginkgo charcoal to make it smaller before using.**
- **I would like to measure phosphoric acid, etc., which were not examined this time.**
- **We want to measure phosphoric acid that could not be examined this time.**