

Response to reviewers' comments

Manuscript: Water-1265258

Title: Estimating the reducing power of carbon nanotubes and granular activated carbon using various compounds

By Heesoo Woo, Ilho Kim, and Saerom Park

Reviewer #2.

1. **Lines 39-42: How large is the specific surface area of CNTs? Have any relevant studies been carried out?**

→ **Response:** The range of specific surface area (SSA) of carbon-based materials in water purification is very wide. In general, GACs with various sizes of pores have the largest SSA, followed by graphene-based materials such as SWCNT and MWCNT because graphene has a large SSA of 2,629 m²/g, theoretically. The large SSA of MWCNT and GAC used in this study were also confirmed with BET analysis, and the results are presented in Table 1 in the manuscript. The table below summarizes the SSA of various carbon-based materials.

Carbon-based materials	Specific surface area (m ² /g)	References
Graphite	17.56	Chen et al., 2004
Carbonised beet pulp	47.5	Dursun et al., 2005
Biochar (sludge based)	70.12	Wang et al., 2017
Nanodiamond	244	Yang et al., 2021
Graphene oxide	497	Ersan et al., 2016
Single-walled carbon nanotubes	541	Yang et al., 2006

2. **Line 45: The "s" in CNTs is missing**

→ **Response:** Corrected

3. **Line 65: Should be 2.1. Reagents**

→ **Response:** Corrected

4. **Lines 80-82: How long and at what temperature were the carbonaceous materials dried?**

→ **Response:** The detail description on the drying method was added in line 82.

5. **Line 100: Should be 1,5-diphenylcarbazine**

→ **Response:** Corrected