ACS Sustainable Chemistry & Engineering

pubs.acs.org/journal/ascecg

Correction

Correction to "Comprehensive Study of Preparation of Carboxy Group-Containing Cellulose Fibers from Dry-Lap Kraft Pulps by Catalytic Oxidation with Solid NaOCl"

Gaoyuan Hou, Korawit Chitbanyong, Miyuki Takeuchi, Izumi Shibata, and Akira Isogai*

ACS Sustainable Chem. Eng. **2023**, *11*, 40, 14782−14792. DOI: 10.1021/acssuschemeng.3c04750

Cite This: *ACS Sustainable Chem. Eng.* 2024, 12, 2921−2923

Read Online

ACCESS | Metrics & More | Article Recommendations | Supporting Information

In our original article, we found some mistakes in the *Y*-axis values in Figures 4, 5, 9, 10b, and Figures S7 and S11 because of the unit errors, i.e., mL or mol, of the amount of 0.5 M NaOH consumed during oxidation. Some values in Sections 3.3 and 3.5 also need revised.

In Section 3.3 (Kinetics of Catalytic Oxidation of the Pulps), the sentence "The slopes of the lines for oxidation of HBKP were ∼8.1 (mL/h), irrespective of the amount of $NaOCl{\cdot}5H_2O$ added (Figure 4a′)" should be replaced with "The slopes of the lines for oxidation of HBKP were ∼32.1 (mL/h), irrespective of the amount of $NaOCl{\cdot}5H_2O$ added (Figure 4a′). Also the sentence "The slopes of the lines for catalytic oxidation of SBKP were 10.1 (mL/h) for 2.5 and 10 mmol NaOCl/g pulp, while the slope for 15 mmol NaOCl/g pulp was 13.3(mL/h)" should be replacd with "The slopes of the lines for catalytic oxidation of SBKP were ∼47.7 (mL/h) for 2.5 and 10 mmol NaOCl/g pulp, while the slope for 15 mmol NaOCl/g pulp was 68.0 (mL/h)."

In Section 3.5 (Effect of the Reaction pH on Catalytic Oxidation of the Pulps), the sentences "The slopes for oxidation of HBKP in water at pH 10 and 11 were ∼8.1 (mL/h), while that at pH 9 was 0.6 (mL/h). Similarly, the slopes for oxidation of SBKP at pH 10 and 11 were 10.1 (mL/h), whereas that at pH 9 was1.2 (mL/h)" should be replaced with "The slopes for oxidation of HBKP in water at pH 10 and 11 were ∼32.1 (mL/h), while that at pH 9 was ∼1.2 (mL/h). Similarly, the slopes for oxidation of SBKP at pH 10 and 11 were 47.7 (mL/h), whereas that at pH 9 was ∼3.7 (mL/h).

■ ASSOCIATED CONTENT

Supporting Information

The Supporting Information is available free of charge at https://pubs.acs.org/doi/10.1021/acssuschemeng.4c00215.

Revised Figures S7 and S11 including original information (PDF)

Published: February 6, 2024

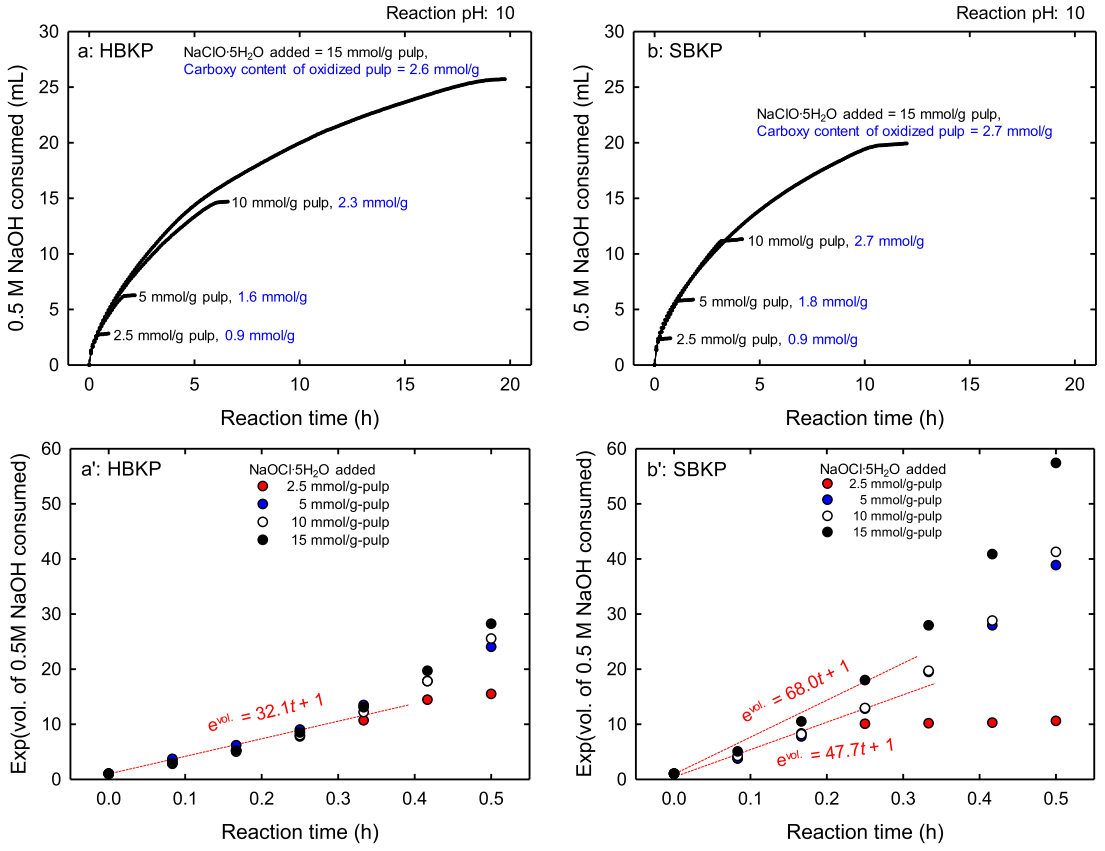

Figure 4. 0.5 M NaOH consumed volume during catalytic oxidation of (a) HBKP and (b) SBKP prepared with various amounts of NaOCl·5H_2O in water at pH 10 against the reaction time. The carboxy contents are indicated for the oxidized pulps in panels (a, b). Relationships between the reaction time and the exponential of the initial 0.5 M NaOH consumed volume for (a′) HBKP and (b′) SBKP during catalytic oxidation with various amounts of NaOCl·5H_2O in water at pH 10.

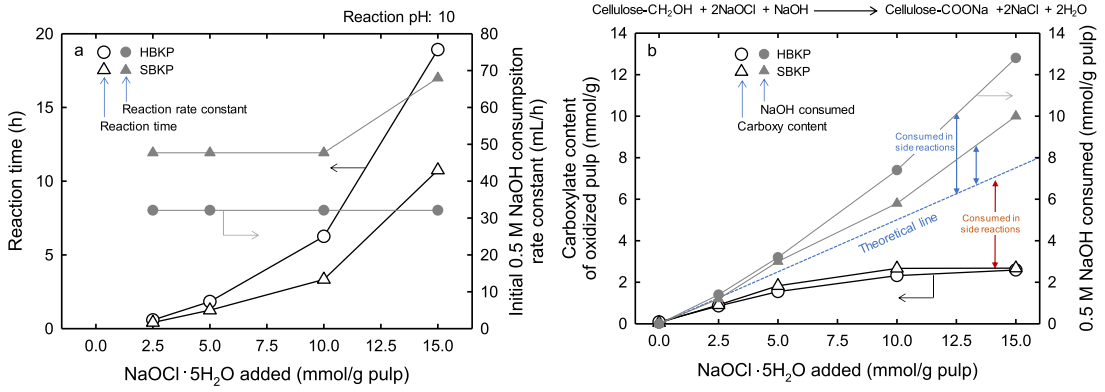

Figure 5. (a) Reaction time necessary for complete oxidation and the initial 0.5 M NaOH consumption rate constant against the amount of NaOCl·5H_2O added in catalytic oxidation, obtained from Figure 4a′, b′ for HBKP and SBKP. (b) Carboxy content of the oxidized pulp and 0.5 M NaOH consumed during oxidation for HBKP and SBKP against the amount of NaOCl·5H_2O added in catalytic oxidation. The theoretical line of the carboxy content or the 0.5 M NaOH consumed for the corresponding amount of NaOCl·5H_2O according to the equation above Figure 5b is also shown.

https://doi.org/10.1021/acssuschemeng.4c00215
ACS Sustainable Chem. Eng. 2024, 12, 2921−2923

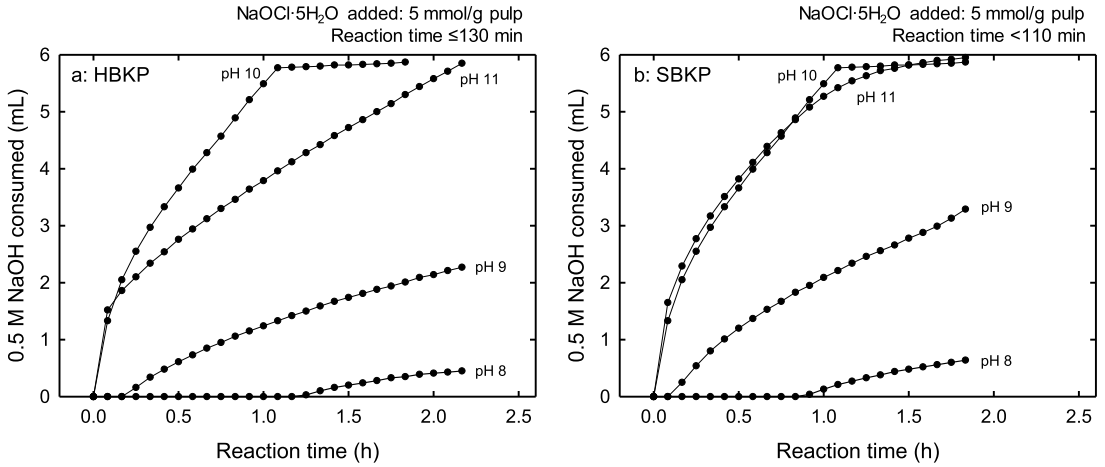

Figure 9. 0.5 M NaOH consumed volume for (a) HBKP and (b) SBKP during catalytic oxidation in water at various pH values vs the reaction time. The amount of $NaOCl·5H_2O$ added in catalytic oxidation was fixed to 5 mmol/g pulp.

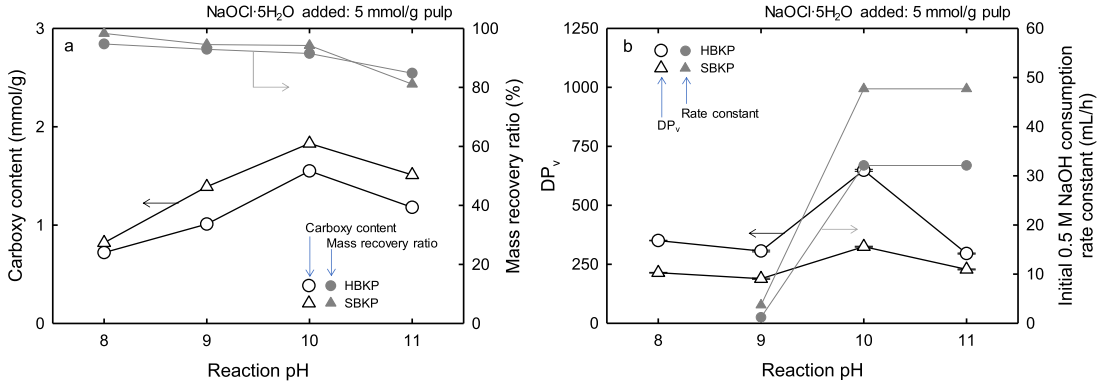

Figure 10. (a) Relationships between the reaction pH and the carboxy content and mass recovery ratio of the oxidized pulps for HBKP and SBKP. (b) Relationships between the reaction pH and the DP_v value and the initial 0.5 M NaOH consumption rate constant of the oxidized pulps prepared in water at various pH values. The amount of $NaOCl·5H_2O$ added in catalytic oxidation was fixed to 5 mmol/g pulp.

https://doi.org/10.1021/acssuschemeng.4c00215
ACS Sustainable Chem. Eng. 2024, 12, 2921−2923