

ENVIRONMENTAL Science & Technology

Environ. Sci. Technol., 1998, 32(7), 876-881, DOI: [10.1021/es970743t](https://doi.org/10.1021/es970743t)

Terms & Conditions

Electronic Supporting Information files are available without a subscription to ACS Web Editions. The American Chemical Society holds a copyright ownership interest in any copyrightable Supporting Information. Files available from the ACS website may be downloaded for personal use only. Users are not otherwise permitted to reproduce, republish, redistribute, or sell any Supporting Information from the ACS website, either in whole or in part, in either machine-readable form or any other form without permission from the American Chemical Society. For permission to reproduce, republish and redistribute this material, requesters must process their own requests via the RightsLink permission system. Information about how to use the RightsLink permission system can be found at <http://pubs.acs.org/page/copyright/permissions.html>



ACS Publications

MOST TRUSTED. MOST CITED. MOST READ.

Copyright © 1998 American Chemical Society

Supplementary Figure 1. Diagram of the apparatus used for the recirculation experiments involving low nitric oxide concentrations.

Supplementary Figure 2. Plot of catalytic efficiency as a function of palladium loading on the activated carbon. A) Overall rates, as moles of N_2O product per min. B) Palladium efficiency measured as turnovers of NO per min (0.1 g catalyst, 10 mL 3 M NaOH, 840 torr NO, 22°C).

Supplementary Figure 3. Plot demonstrating the increase in catalysis rate obtained by reducing Pd(II) to Pd(0) on an activated carbon support (0.1 g catalyst, 10 mL 3 M NaOH, 840 torr NO, 22°C).

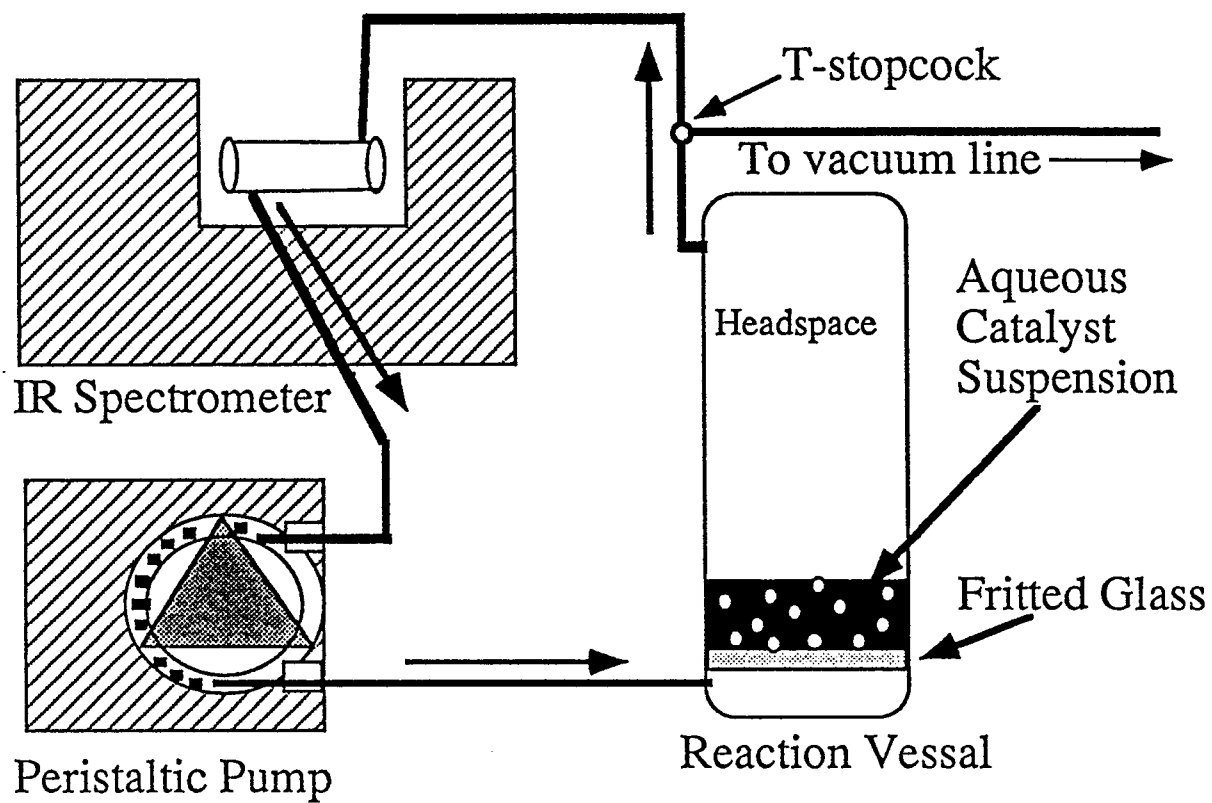
Supplementary Figure 4. Plot demonstrating the increase in catalysis rate obtained by reducing Pd(II) to Pd(0) on a barium sulfate support (0.1 g catalyst, 10 mL 3 M NaOH, 840 torr NO, 22°C).

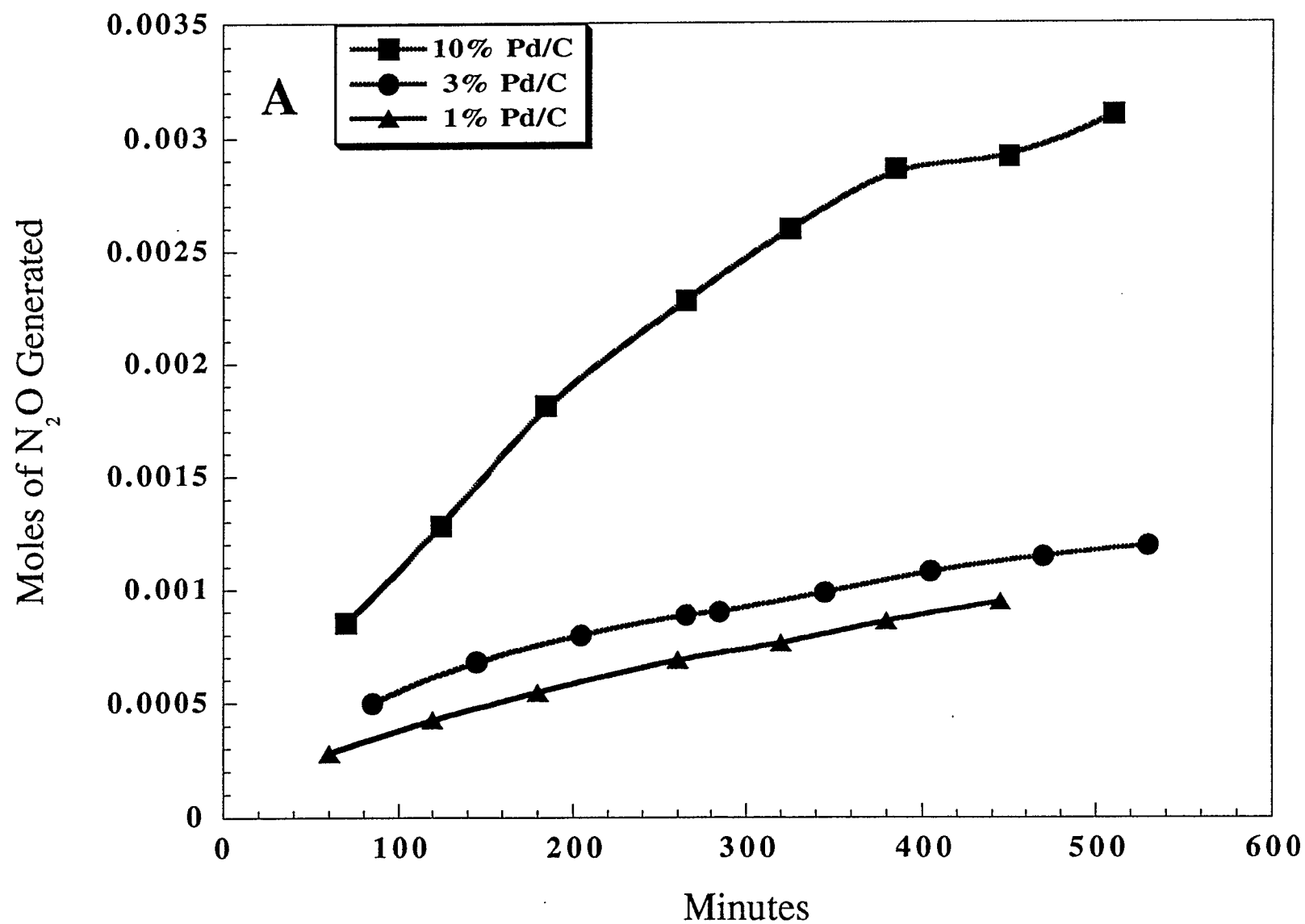
Supplementary Figure 5. Plot of the pH of a solution over time when the NaOH concentration was the limiting reagent. Product formation became negligible below pH 8. The horizontal line at pH 6.3 represents the position of $E = 0$ calculated by the Nernst

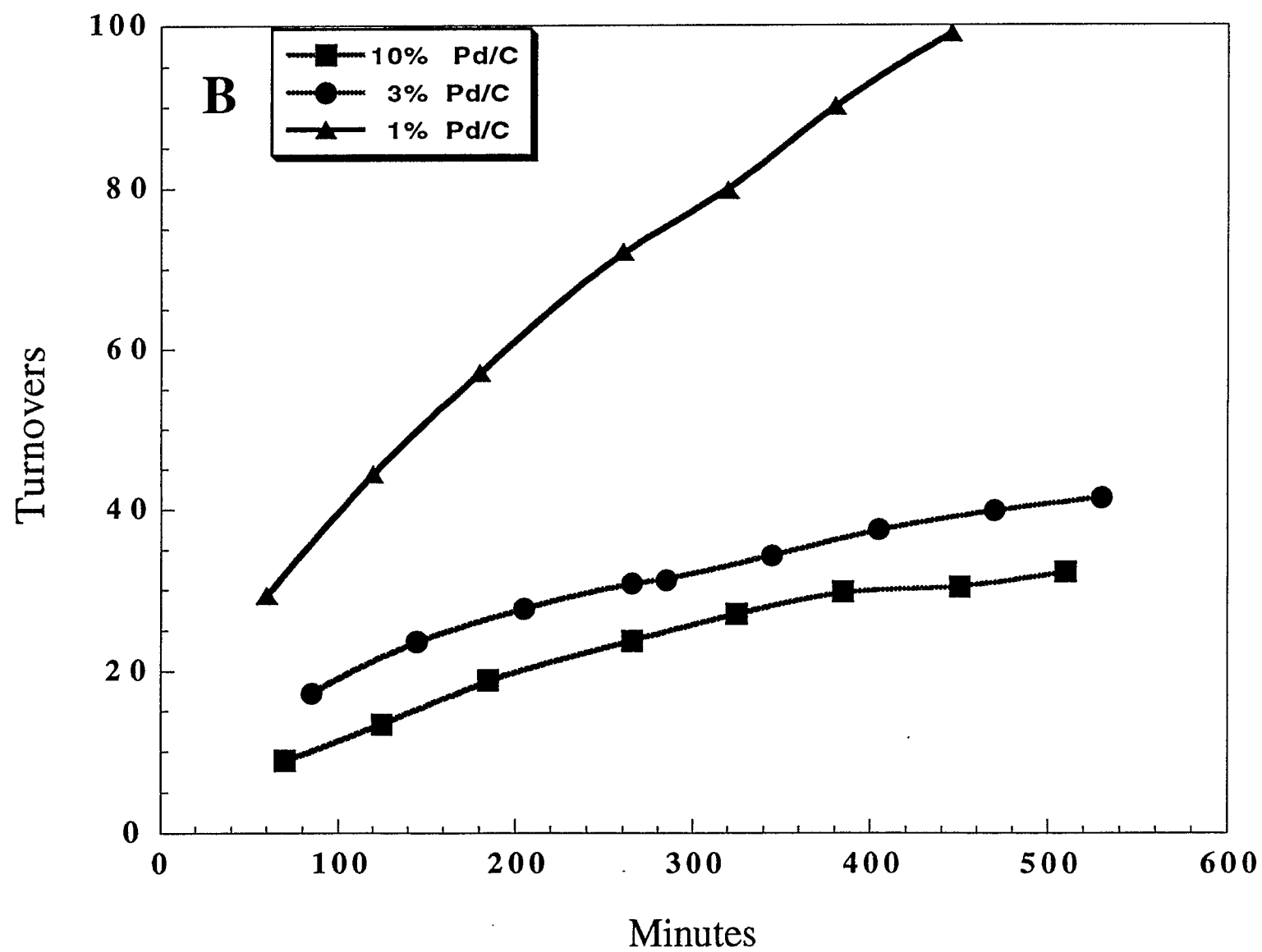
equation and assuming a hyponitrite intermediate (0.1 g catalyst, 10 mL initial pH 13, 840 torr NO, 22°C).

Supplementary Figure 6. Rate of N_2O formation above a dry, base-impregnated catalyst in H_2O -saturated nitric oxide. The plateau region where no additional N_2O forms corresponds to complete depletion of hydroxide (22°C).

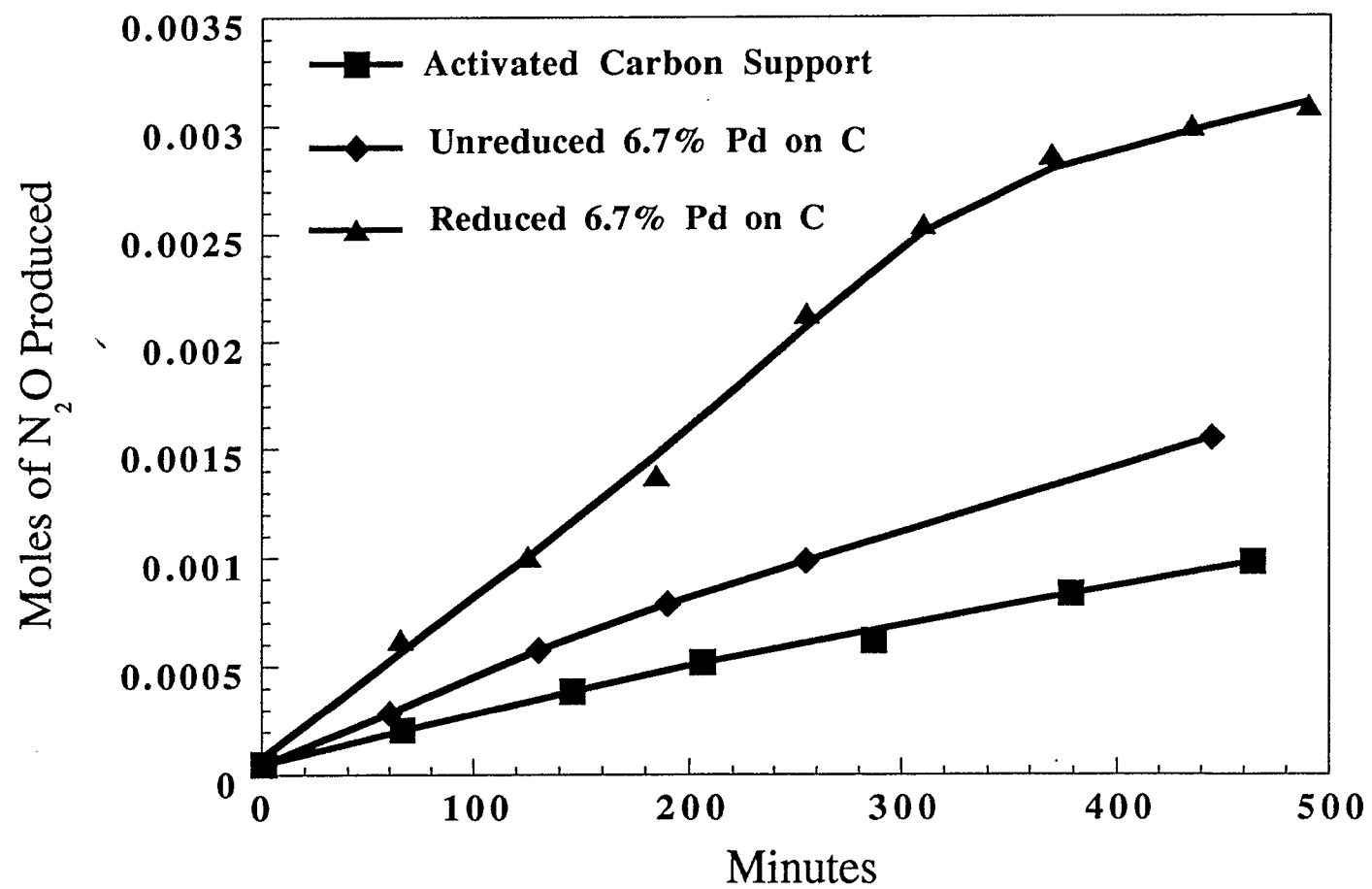
Supplementary
Figure 1.



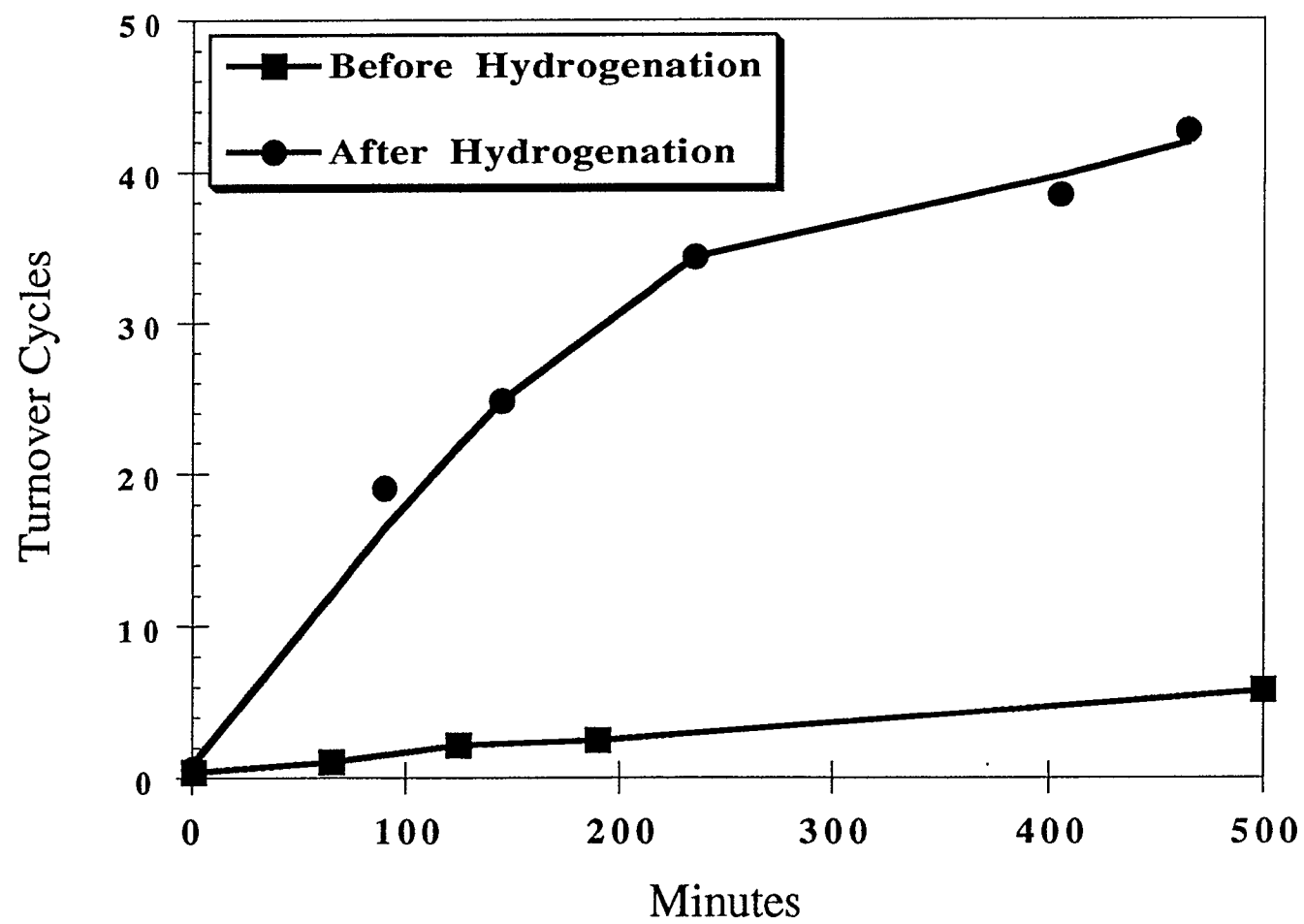




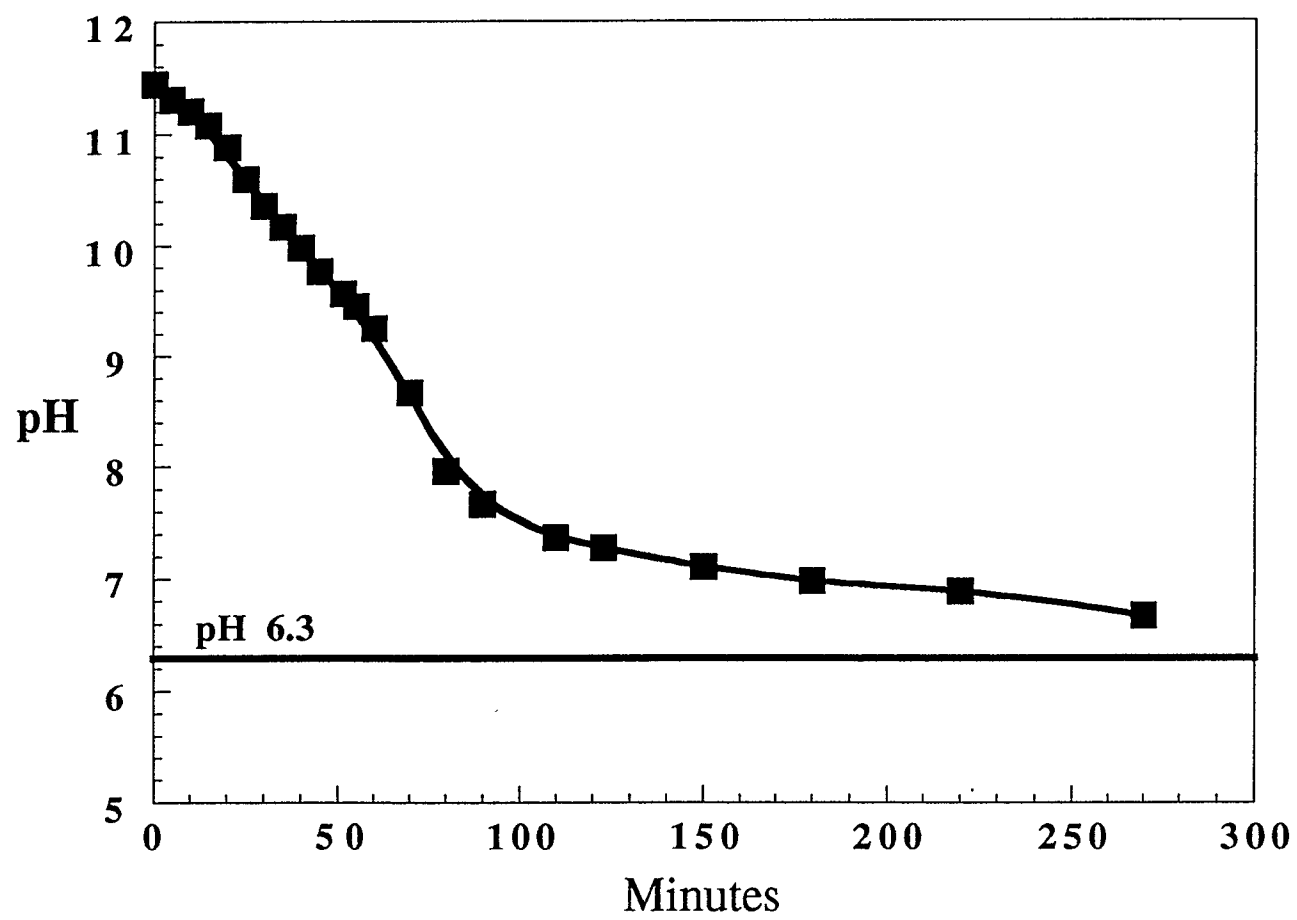
Supplementary
Figure 3.



Supplementary
Figure 4.



Supplementary
Figure 5.



Supplementary
Figure 6.

