

Name_

Flame Test Kit Worksheet

Data Table 1

Metal	Color of Flame	

Data Table 2

Metal/Color of Flame	λ (nm)	λ (m)	ΔE (J)

© 2018, Flinn Scientific, Inc. All Rights Reserved. Reproduction permission is granted from Flinn Scientific, Inc. Batavia, Illinois, U.S.A. No part of this material may be reproduced or transmitted in any form or by any means, electronic or mechanical, including, but not limited to photocopy, recording, or any information storage and retrieval system, without permission in writing from Flinn Scientific, Inc.

Post-Lab Questions

- 1. Use Table 1 in the *Background* section to record the approximate wavelength of light emitted for each metal in Data Table 2.
- 2. Convert each of the wavelengths in the Data Table from nanometers to meters. Record the wavelengths in meters in the Data Analysis Table. Show at least one sample calculation in the space below.
- 3. Use Equation 1 from the *Background* section to calculate the change in energy, ΔE , for each metal. Show all work. Record the values in Joules in Data Table 2.

- 4. Predict the color of the flame if the following materials were heated in the flame. Explain your predictions.
 - *a*. Cupric nitrate, $Cu(NO_3)_2$
 - *b*. Sodium sulfate, Na₂SO₄
 - c.Potassium nitrate, KNO3