UNITED STATES SECURITIES AND EXCHANGE COMMISSION April 18, 2016

ORDER GRANTING CONFIDENTIAL TREATMENT UNDER THE SECURITIES ACT OF 1933

Ignyta, Inc.

File No. 333-208741 - CF#33314

Ignyta, Inc. submitted an application under Rule 406 requesting confidential treatment for information it excluded from the Exhibits to a Form S-3 registration statement filed on December 23, 2015.

Based on representations by Ignyta, Inc. that this information qualifies as confidential commercial or financial information under the Freedom of Information Act, 5 U.S.C. 552(b)(4), the Division of Corporation Finance has determined not to publicly disclose it. Accordingly, excluded information from the following exhibit will not be released to the public for the time period specified:

Exhibit 10.1 through December 23, 2025

For the Commission, by the Division of Corporation Finance, pursuant to delegated authority:

Brent J. Fields Secretary