

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-A

FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES
PURSUANT TO SECTION 12(b) OR (g) OF THE
SECURITIES EXCHANGE ACT OF 1934

FLUIDIGM CORPORATION.

(Exact name of registrant as specified in its charter)

Delaware

(State of incorporation or organization)

77-0513190

(I.R.S. Employer Identification No.)

**7000 Shoreline Court, Suite 100
South San Francisco, California**

(Address of principal executive offices)

94080

(Zip Code)

Securities to be registered pursuant to Section 12(b) of the Act:

Title of each class
to be so registered

Common Stock, \$0.001 par value per share

Name of each exchange on which
each class is to be registered

The NASDAQ Stock Market LLC

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A. (c), check the following box.

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A. (d), check the following box.

Securities Act registration statement file number to which this form relates: **333-150227**

Securities to be registered pursuant to Section 12(g) of the Act:

Not Applicable

(Title of Class)

Item 1. Description of Registrant's Securities to be Registered

Fluidigm Corporation (the "Registrant") registers hereunder its Common Stock, \$0.001 par value per share (the "Common Stock"). A description of the Common Stock is incorporated herein by reference to the section captioned "Description of Capital Stock" in the Registrant's Registration Statement on Form S-1 (File No. 333-150227), as originally filed with the Securities and Exchange Commission (the "Commission") on April 14, 2008, as amended (the "Registration Statement"), and in the prospectus included in the Registration Statement to be filed separately by the Registrant with the Commission pursuant to Rule 424(b) under the Securities Act of 1933, as amended, which prospectus shall be deemed to be incorporated by reference herein.

Item 2. Exhibits

Pursuant to the Instructions as to Exhibits with respect to Form 8-A, no exhibits are required to be filed, because no other securities of the Registrant are registered on NASDAQ Global Market and the securities registered hereby are not being registered pursuant to Section 12(g) of the Securities Exchange Act of 1934, as amended.

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

Date: September 16, 2008

FLUIDIGM CORPORATION

By: /s/ Vikram Jog

Vikram Jog
Chief Financial Officer