



DEPARTMENT OF COMMERCE

International Trade Administration

Howard Hughes Medical Institute, et al.

Notice of Consolidated Decision on Applications
for Duty-Free Entry of Scientific Instruments

This is a decision pursuant to Section 6(c) of the Educational, Scientific, and Cultural Materials Importation Act of 1966 (Pub. L. 89-651, as amended by Pub. .106-36; 80 Stat. 897; 15 CFR part 301). Related records can be viewed between 8:30 A.M. and 5:00 P.M. in Room 3720, U.S. Department of Commerce, 14th and Constitution Ave, NW, Washington, D.C.

Comments: None received. Decision: Approved. We know of no instruments of equivalent scientific value to the foreign instruments described below, for such purposes as each is intended to be used, that was being manufactured in the United States at the time of its order.

Docket Number: 12-048. Applicant: Howard Hughes Medical Institute, Chevy Chase, MD 20815. Instrument: Micro-litre and nanolite dispensing system. Manufacturer: TTP Labtech

Ltd., United Kingdom. Intended Use: See notice at 77 FR 70141, November 23, 2012. Comments: None received.

Decision: Approved. We know of no instruments of equivalent scientific value to the foreign instruments described below, for such purposes as this is intended to be used, that was being manufactured in the United States at the time of order. Reasons: The instrument will be used to obtain crystals of biological macromolecules and complexes such as ribonucleic acid, proteins, and ribosomes to enable the determination of their three-dimensional atomic resolution structures. The unique features of this instrument which are required for the experiments are that it has a disposable tip system, its speed of operation, and its ability to deliver the small drops required to perform the experiments.

Docket Number: 12-049. Applicant: Howard Hughes Medical Institute, Chevy Chase, MD 20815. Instrument: Micro-litre and nanolitre dispensing system. Manufacturer: TTP Labtech Ltd., United Kingdom. Intended Use: See notice at 77 FR 70141, November 23, 2012. Comments: None received.

Decision: Approved. We know of no instruments of equivalent scientific value to the foreign instruments

described below, for such purposes as this is intended to be used, that was being manufactured in the United States at the time of order. Reasons: The instrument will be used to obtain crystals of biological macromolecules and complexes such as ribonucleic acid, proteins, and ribosomes to enable the determination of three-dimensional atomic resolution structures. The unique features of this instrument which are required for the experiments are that it has a disposable tip system, its speed of operation, and its ability to deliver the small drops required to perform the experiments.

Docket Number: 12-050. Applicant: North Carolina State University, Raleigh, NC 27695. Instrument: Twin-screw Microcompounder. Manufacturer: DSM, the Netherlands. Intended Use: See notice at 77 FR 70142, November 23, 2012. Comments: None received. Decision: Approved. We know of no instruments of equivalent scientific value to the foreign instruments described below, for such purposes as this is intended to be used, that was being manufactured in the United States at the time of order. Reasons: The instrument will be used to study biomaterials such as starches, lignin, and proteins, and compare them with styrenics and petroleum based materials. The behavior of

these materials before, during, and after physical or chemical modification, in excess or limited water, without shear or at high shear, as well as their hydration, plasticization or blending with other oligomers will be investigated. Moreover, foams will be generated by the use of blending a suitable blowing agent and/or the carbonization of the materials to determine their density, foam structure and tensile and compression properties. The goal of this project will be to identify suitable technologies for producing moldable biomass based materials for applications presently occupied by conventional plastics. The core of this research will use rheology, spectroscopies and thermal techniques to follow macromolecular structures and functions on the biopolymers after applying the extruder. The unique features of this instrument are its recirculation loop and its ability to connect to a fiber spinner.

Docket Number: 12-051. Applicant: University of Central Florida, Orlando, FL 32816. Instrument: Near Ambient Pressure Scanning Probe Microscope. Manufacturer: SPECS Surface Nano Analysis, GmbH, Germany. Intended Use: See

notice at 77 FR 70141-42. Comments: None received.

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Decision: Approved. We know of no instruments of equivalent scientific value to the foreign instruments described below, for such purposes as this is intended to be used, that was being manufactured in the United States at the time of order. Reasons: The instrument will be used to determine the relationships between nanoparticle size, shape and chemical state and their catalytic activity in various chemical reactions, by investigating solid catalytically-active materials such as transition metals and examining their chemical states and chemical reactivity before and after applying a specified pressure and temperature inside a vacuum chamber inside the instrument. The unique features of this instrument include its small volume (0.045 L) reaction cell in which the sample and STM scanner are placed, which can maintain a pressure of up to 100 mbar while the surrounding large volume (>100 L) Ultra-High Vacuum (UHV) chamber maintains a pressure lower than 10^{-6} mbar, allowing the sample to be held at a controlled pressure ranging from UHV up to 100 mbar while measurements are recorded, and can be easily integrated into a system of other UHV measurement instruments to transfer the sample to other measurement chambers. In addition to pressure

control, another unique feature of the instrument is its ability to control the temperature from room temperature to 300 degrees Celsius in a gaseous environment (up to 10 mbar).

Gregory W. Campbell
Director
Subsidies Enforcement Office
Import Administration

_December 20, 2012_____

Date

[FR Doc. 2012-31314 Filed 12/27/2012 at 8:45 am; Publication
Date: 12/28/2012]