~~DEVICE FOR CAPTURING OBJECT AND METHOD FOR USING THE SAME~~

METHOD OF USING AN OBJECT-CAPTURING DEVICE

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to an object-capturing device, which captures objects, such as microorganisms and chemical substances, in the air, and a method for using the object-capturing device.

Description of the Related Art

Conventionally, a technique of capturing objects, such as air-borne microorganisms and chemical substances, by sucking air through a filter and separating the objects by the filter has been well-known. A well-known capturing device for capturing air-borne microorganisms has a carrier, which undergoes a phase transition from gel to sol at a temperature raised from room temperature, on a capturing dish, as disclosed in, for example, Japanese Patent Application Laid-Open No. 2009-131186. Such capturing device is attached to an impactor-type air sampler. When air sucked by the air sampler collides with the carrier, microorganisms carried by the air flow are captured by the carrier in a gel phase. The carrier solates by raising the temperature, and thereby the captured microorganisms with the carrier in a sol phase are obtained from the capturing dish. The obtained microorganisms are counted according to a predetermined counting method.

A well-known method for counting microorganisms is the ATP method, which quantifies adenosine triphosphates (ATPs) extracted from microorganisms and thereby counts the microorganisms, as disclosed in, for example, Japanese Patent Application Laid-Open No. 11-137293. The ATP method extracts ATPs

What is claimed is:

1. A method ~~for~~ of using an object-capturing device, which includes ~~a carrier capturing an object, and~~ a capturing dish holding ~~the~~ a carrier, which captures an object, on a first side of the capturing dish, ~~and in which~~wherein the capturing dish has a through hole extending from the first side to a second side of the capturing dish~~,~~; and a housing placed over the capturing dish to cover the carrier, wherein the through hole of the capturing dish connects a space formed between the first side and the housing with an outside of the housing, wherein the housing has a discharge opening for discharging contents in the space out of the housing, and a filter for separating the object is disposed outside the discharge opening, the method comprising the successive steps of:

directing the carrier upward and capturing the object; and

directing the carrier downward and contacting a reagent for detecting the object with the object captured on the carrier through the through hole.