SUMMARY

[003a] In an aspect, the present disclosure refers to an ingestible device configured to be tested using a probe located external from the ingestible device, the ingestible device comprising: a substrate comprising a control unit and a memory for storing information; and first and second materials physically associated with the substrate, the first and second materials being dissimilar materials; a third material deposited on a surface of the first material, the third material being an electrically conductive material; an electrically insulative layer formed on the first material and the substrate; and a fourth material physically associated with the substrate and disposed on the electrically insulative layer, the fourth material being an electrically conductive material; wherein third material is configured to communicatively couple to a first probe plate and the fourth material is configured to communicatively couple to a second probe plate, such that information can be communicated between the third material and the first probe plate and information can be communicated between the fourth material and the second probe plate, wherein the first and second probe plates are located external from the ingestible device.

[003b] In an aspect, the present disclosure refers to a system for tracking an ingestible device configured to be tested using a probe located external from the ingestible device, from an origin to a destination, the system comprising: a probe comprising: a power source; a processor coupled to the power source configured to receive and send information; a first plate coupled to the processor; and a second plate coupled to the processor, wherein the power source is configured to be controlled by the processor to produce an output at the first and the second plates; and an ingestible device comprising: a substrate comprising a control unit and a memory for storing information; and first and second materials physically associated with the substrate, the first and second materials being dissimilar materials; a third material deposited on a surface of the first material, the third material being an electrically conductive material; an

electrically insulative layer formed on the first material and the substrate; and a fourth material physically associated with the substrate and disposed on the electrically insulative layer, the fourth material being an electrically conductive material; wherein third material is configured to communicatively couple to a first probe plate and the fourth material is configured to communicatively couple to a second probe plate, such that information can be communicated between the third material and the first probe plate and information can be communicated between the fourth material and the second probe plate, wherein the first and second probe plates are located external from the ingestible device.

[004] Disclosed is a system to manage product supply in a supply chain environment. In various examples, the disclosure includes capacitive plates which probe a variety of products, resulting in indications of product validity or invalidity. In this manner, various supply chain or other pursuits may be accomplished.

[005] The products include, for example, IV bags, syringes, ingestible event markers (IEMs) and similar devices, as disclosed and described in PCT application serial no. PCT/US2006/016370 published as WO/2006/116718; PCT application serial no. PCT/US2007/082563 published as WO/2008/052136; PCT application serial no. PCT/US2007/024225 published as WO/2008/063626; PCT application serial no. PCT/US2007/022257 published as WO/2008/066617; PCT application serial no. PCT/US2008/052845 published as WO/2008/095183; PCT application serial no. PCT/US2008/053999 published as WO/2008/101107; PCT application serial no. PCT/US2008/056296 published as WO/2008/112577; PCT application serial no. PCT/US2008/056299 published as WO/2008/112578; PCT application serial no. PCT/US2008/077753 published as WO 2009/042812; PCT application serial no. PCT/US09/53721; and PCT application serial no. PCT/US2007/015547 published as WO 2008/008281; as well as United States Provisional Application Serial Nos. 61/142,849; 61/142,861; 61/177,611; 61/173,564; each in its entirety is incorporated herein by reference. Such products may typically be designed to include conductive materials/components. The use of capacitive coupling to probe the product's conductive materials and components by the capacitive plates may indicate the presence of the correct configuration of conductive components of the product.

Alternatively, failure to communicatively couple when probed may indicate product nonconformance, e.g., one or more conductive materials is absent, incorrectly configured, etc.

BRIEF DESCRIPTION OF THE DRAWINGS

[006] Figure 1A shows a pharmaceutical product with a device that can be interrogated using capacitive coupling in accordance with one aspect of the present invention.