



Standard Terminology Related to Biorationals¹

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1. Scope

1.1 This terminology is used in test methods, specifications, guides, and practices related to biorationals comprising biologically-derived materials or, if synthesized, the material must be structurally similar and functionally identical to a biologically occurring material with minor differences between the stereochemical isomer ratios. These definitions are written to ensure that standards related to these materials and their uses are properly understood and interpreted. Terms included in this standard cover materials or products derived from animals, plants, microorganisms, or minerals and focus on functional or marketing claims, or both.

2. Terminology

biochemical pesticide, *n*—biopesticide that is a naturally occurring substance that controls pests by nontoxic mechanisms. Biochemical pesticides include substances, such as insect sex pheromones, that interfere with mating, as well as various scented plant extracts that attract insect pests to traps.

¹ This terminology is under the jurisdiction of ASTM Committee E35 on Pesticides, Antimicrobials, and Alternative Control Agents and is the direct responsibility of Subcommittee E35.22 on Pesticide Formulations and Delivery Systems.

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biopesticide, *n, adj*—the term for certain types of pesticides derived from such natural materials as animals, plants, bacteria, and certain minerals.

biorational, *n, adj*—the term used to characterize a broad range of low environmental impact substances or products that are typically biologically-derived or, if synthetic, structurally similar and functionally identical to a biologically occurring material with minor differences between the respective stereochemical isomer ratios derived from biological or synthetic origins.

DISCUSSION—Biorationals include biopesticides as well as nonpesticidal products, such as, but not limited to, those that are used for crop stress management, enhanced plant physiology benefits, root growth management, postharvest treatments or as an alternative to pesticides.

DISCUSSION—Biorationals are used in areas, such as but not limited to, agriculture, aquaculture, forestry, plant health, industrial and residential areas.

biosurfactant, *n*—a biologically produced molecule that acts as a surface-active agent.

microbial pesticide, *n*—biopesticide consisting of a microorganism (for example, a bacterium, fungus, virus or protozoan) as the active ingredient.

DISCUSSION—Microbial pesticides can control many different kinds of pests, although each separate active ingredient is relatively specific for its target pest[s].

plant-incorporated-protectant, *n*—biopesticidal substance that plants produce from genetic material that has been added to the plant.