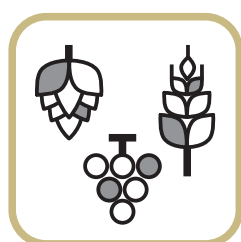


Kirin's Major R&D Technologies

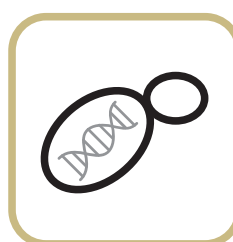
The Kirin Group addresses health and other social issues through its core businesses — alcoholic beverages, non-alcoholic beverages, and pharmaceuticals and bio-chemicals. By creating new value in this way, the Group aims to achieve sustained growth in tandem with society. Kirin's R&D Division operates as the core of the R&D activities of the Kirin Group and pursues initiatives through collaborating closely with each business to create innovation that leads to new value for consumers and society. By utilizing the various technologies owned, the Kirin Group will actively promote open innovation to facilitate the development, application, and commercialization of promising technologies.

□ : Beverage □ : Health □ : Container and packaging □ : Plant biotechnology □ : Advanced analysis and evaluation



Processing and handling of ingredients

Appropriately selects ingredients, such as malt, barley, hops and grapes, and processes them to bring out the best flavor



Fermentation control

Ascertains the diverse characteristics of yeast and designs a fermentation process to achieve the desired flavor in an efficient, sure manner



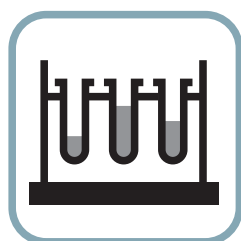
Flavor control for alcoholic and non-alcoholic beverages

Scientifically defines an image of the target flavor and achieves the desired flavor in a stable way by developing a new processing method and/or combining technologies



Selected component removal

Removes only the selected, unnecessary components while maintaining a good flavor (purine bases, caffeine, polyphenol, etc.)



Food functionality evaluation

Evaluates the effectiveness and safety of food materials with health functionality



Functional food design and evaluation

Evaluates the adequacy as a product and improves formulation and ingredients to commercialize food materials with health functionality



Container and packaging design and evaluation

Designs the shapes of containers and packaging (bottles, cans, plastic bottles, packaging materials, etc.) and evaluates the basic performance



Container and packaging surface processing

Processes the inner and outer sides of containers, such as bottles and plastic bottles, to enhance or newly add functions



Plant biotechnology

Grows a large amount of plants efficiently and produces useful substances



Cutting-edge advanced analysis and evaluation

Performs advanced analysis and evaluation to help create new value and secure quality and safety