

Abstract

Microorganisms were the first forms of life to develop on Earth and later evolved into living beings, namely plants, humans and animals.

People have taken advantage of existing natural microorganisms for many years to use as food, in food production, in drinks and medicines, for chemicals used in industry and agriculture, for elimination of waste, and to improve environmental quality.

After people discovered how to alter the structure of living cells, humans used biotechnology to genetically modify microorganisms to have characteristics or properties that are different from natural microorganisms to produce a new substance or to make them more effective or produce various substances in greater numbers than before. The benefits that people have obtained from genetic modification to make new microorganisms is that microorganisms can be patented, the same as inventions of other humans. Humans can also continue to interfere with human genetic structures of other living organisms, including plants, animals, and humans. Biotechnology has been used to extract and produce new biological entities of living things and patent law has been used as a tool to decide on rights. However, today the scope of patent law and practices of patent offices in various countries about the protection of inventions associated with microorganisms differs in the level of protection.

Study and analysis of patent law and practices of patent offices in other countries demonstrates that the international agreement on intellectual property (TRIPS) has not forced the World Trade Organization member countries to provide the same level of legal protection to patents where an invention is a microorganism coming from biotechnology. The TRIPS Agreement does not define the term “microorganism” or “invention” and the result is that World Trade Organization member countries are free to define these words and thus the scope of protection so that protection varies between countries.

Section 9(1) of the Patent Act B.E 2522 (1979) provides that naturally existing microorganisms and their components are not protected and therefore cannot be patented. However, in practice the Intellectual Property Department considers inventions related to microorganism can be patented if the invention is new, it involves an inventive step, and is capable of industrial application. Therefore, Thai patent law is consistent with TRIPS. While the Intellectual Property Department provides for a narrower scope of protection than patent offices of developed countries and does not protect naturally existing microorganisms and their components or man-made microorganisms, but where the characteristics or properties which are the same or significantly similar to something that is naturally occurring or appears in nature, this is possible because the TRIPS agreement only provides for a minimum standard and does not specify the scope of protection in practice. As Thailand can prove that it provides protection to microorganisms which come from biotechnology, even if it a lower level than developed countries, it does not constitute a violation of the TRIPS Agreement.

Article 130, Paragraph 3 of the Japan-Thailand Economic Partnership Agreement (JTEPA), dated 3 April 2007, states that "[e]ach Party shall ensure that any patent application shall not be rejected solely on the grounds that the subject matter claimed in the application is related to a naturally occurring microorganism". Japan is not requesting Thailand allow naturally occurring microorganisms to be patented by Japanese nationals and Thailand is not forced to amend Section 9(1) Patent Act B.E 2522 (1979) to use the same words as Article 27.3(B) of TRIPS. Thailand's obligation under JTEPA is that examiners of patents must not reject patent applications for Japanese nationals solely on the grounds that it relates to naturally occurring microorganisms, but must provide a reason in accordance with the law. For example, it is not an invention under Thai law or does not involve an inventive step.

The manual of the Intellectual Property Department relating to patents issued in the middle of 2550 specifies that an invention related to microorganisms under Section 9(1) can be patented. The manual is not yet in the public domain so as to provide an opportunity for Japan to dispute. The manual should be published to ensure transparency in the operations of the Department of Intellectual Property and to comply with JTEPA in good faith.