Wilson, K, Walker, J.: **Principles and Techniques of Practical Biochemistry.** 5th Ed. – Cambridge University Press, Cambridge 1999. ISBN 0-521-65873-X, 784 pp., USD 130.00.

It is necessary to have a practical up to date guide to experimental techniques at hand in a laboratory. This book belongs to such kind of texts. It covers all branches of basic as well as advanced techniques. The book is composed of 15 chapters, each of which is divided into several subsections. Each topic consists of brief theoretical background, characterisation of instrumentations and instruction for application, which are supplemented with clear pictures and key terms. There are several useful examples and calculations for exercising with an answer at the end of each section. No detailed protocols are presented, but explanations of the processes. It is really valuable and beneficial that differences between animals and plants are emphasised, when it is important.

At the introduction general principles of biochemical investigations are given, where important terms and definitions are covered. The following two chapters concern probably the most fashionable and used area – molecular biology. After a theoretical introduction a description of the most frequently employed methods are outlined for molecular cloning and gene analysis. The immunochemical techniques are reflected in next chapter. The necessary background, terms as well as instructions important for understanding these reactions are given with comprehensible diagrams. The use of these methods for living cells in immunohistochemistry and immunohistocytology is also included, starting with immunoenzyme microscopy up to flow cytometry. More or less classical methods follow that cannot be missing in such textbook. Centrifugation techniques are mentioned in chapter 5. They are followed by protein purification and characterisation. This is introduced with protein composition and structure. Also methods for protein estimation are given and compared and their difficulties are outlined. Necessarily, another chapter is devoted to all aspects of enzymes. Namely enzymatic kinetics is explained. Chapter eight concerns a more modern topic: investigation of bio-molecular interactions on cell surface; it deals with study of receptors and transporters and with mechanisms of cell signalling. Spectroscopic techniques are divided into two chapters: the first one deals atomic and molecular electronic spectroscopy, the other is about vibrational spectroscopy, and electron and nuclear spin resonance. More specialised methods are described in the latter part. Separate section concerns mass spectrometric technique, which gains recently great attention. Quite common and widely used is electrophoresis, the content of next part. Also chromatography, which belongs to classical methods, is dealt in a separate chapter. Here, all kinds of separation systems are outlined. In the following part, radioisotope methods, still used in research, are elaborated with their restrictions and risks. The last chapter covers electrochemical techniques, may be the oldest one. They group several methods, which were developed into sophisticated methods in the meantime.

The book represents a fundamental guidebook for work in a laboratory. The most exploited methods are comprehensibly described. Although it also contains an explanation of very basic and frequently used techniques, these are still necessary for every beginner to make acquaintance of them to be capable for starting research. It is an understandable and useful aid in a laboratory and can be recommended for students and freshmen.

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