

A) CPK and CK-MB

CPK (CK) is a test item that has been established up to the present as a routine test. It is an item found in automatic chemical analyzers. Therefore, the automation rate is believed to be more than 95%.

There are UV and colorimetric (color) methods. However, the weight of the UV method is high. Although this is one of the minority test items for heart disease, CK-MB, which is an isozyme of CPK, has also been made into kits for the past several years.

CPK isozymes are fractionated into three types consisting of CK-BB, CK-MB and CK-MM. CK-MB is present in high concentrations in the myocardium. Therefore, there is a suspicion of heart disease such as myocardial infarction, etc. if CK-MB is elevated.

An examination of the current situation shows the number of CK-MB tests to be less than about 3% at approximately 1 million tests/year in comparison to the 35 million tests/year of the CPK test. Although it is not believed that a rapid increase can be expected even in the future, there is also a possibility of use as combination assay if new test items, etc. are developed.

B) Fat-related tests (total cholesterol and others)

Total cholesterol, neutral fat and HDL cholesterol are ranked as representative tests among the various biochemical test items. The measurement methods emphasize enzyme methods. The automation rate is more than 95% and many of the products are highly perfected.

On the other hand, 6 types of apolipo-protein are known, apo A-I, A-II, B, C-II, C-III and apo E. Kits are available for the two types of measurement methods, SRID and immunoturbidimetry.

SRID reagents were marketed by Daiichi Kagaku Yakuhin in 1983. Immunoturbidimetry reagents were made into kits in 1986. As a result, these are reagents found in automatic chemical analyzers.