

# Immunofixation by Electrophoresis (Urine)



## Does this test have other names?

Immunofixation electrophoresis, IFE

## What is this test?

This test separates and measures proteins in your urine. It looks for an abnormal protein called monoclonal protein, also called M-protein.

An M-protein is a type of abnormal immunoglobulin made by plasma cells. Plasma cells are a kind of white blood cell. Your body uses immunoglobulins to make antibodies that help attack invaders, such as bacteria and viruses. If your body makes M-protein, it may mean that you have one of several types of cancer, such as multiple myeloma, or another serious health problem.

This test uses an electric current to push proteins in a urine sample through a special gel. This is called electrophoresis. The lab treats the gel to keep only certain proteins. This is called immunofixation. A stain makes different proteins show up as bands, or peaks.

## Why do I need this test?

You may need this test if your healthcare provider thinks you have a health condition, such as:

- Multiple myeloma
- Primary amyloidosis
- Waldenstrom macroglobulinemia

Multiple myeloma is a type of cancer that causes abnormal plasma cells to build up in bone marrow. As a result, many bones grow tumors. When this happens, the bone marrow can't do its normal job of making different blood cells. Symptoms of multiple myeloma include:

- Pain in the bones
- Unusual fractures
- Unusual bleeding or bruising
- Extreme tiredness (fatigue)
- Shortness of breath

Primary amyloidosis causes a substance called amyloid to gather in clumps in your organs. Amyloid is made of fragments of antibody protein. When amyloid gathers in organs, such as the kidneys, lungs, heart, or brain, it can damage them. Some people may have both multiple myeloma and primary amyloidosis.

Waldenstrom macroglobulinemia is a rare type of non-Hodgkin lymphoma, which is a kind of cancer. It's caused by high levels of monoclonal immunoglobulin M (IgM). Symptoms may include:

- Fatigue and weakness
- Unusual bleeding or bruises
- Weight loss

## What other tests might I have along with this test?

You may need other tests to help show if you have a health problem. These tests may include:

- Analysis of a sample of bone marrow
- Biopsy of tissue from your body to check for signs of amyloidosis
- X-rays to check your bones
- Urine test to check for unusual levels of protein
- Complete blood count that includes measuring the number of different cells in your blood
- Measurement of levels of immunoglobulins in your blood
- CT scans to look at your lymph nodes, spleen, and liver

## What do my test results mean?

Test results may vary depending on your age, gender, health history, and other things. Your test results may be different depending on the lab used. They may not mean you have a problem. Ask your healthcare provider what your test results mean for you.

## How is this test done?

This test needs a 24-hour urine sample. For this sample, you must collect all of your urine for 24 hours. Empty your bladder completely first in the morning without collecting it. Note the time. Then collect your urine every time you go to the bathroom over the next 24 hours.

## Does this test pose any risks?

This test poses no known risks.

## What might affect my test results?

No other factors can affect your results.

## How do I get ready for this test?

You don't need to prepare for this test. But be sure your healthcare provider knows about all medicines, herbs, vitamins, and supplements you are taking. This includes medicines that don't need a prescription and any illegal drugs you may use.

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