

## 5.1.12-00 Electron spin resonance



## What you can learn about ...

- Zeeman effect
- Energy quantum
- Quantum number
- Resonance
- $g$ -factor
- Landé factor

## Principle:

The  $g$ -factor of a DPPH (Diphenylpicrylhydrazyl) and the half-width of the absorption line are determined, using the ESR apparatus.

## What you need:

ESR resonator with field coils	09050.00	1
ESR power supply	09050.93	1
Power supply, universal	13500.93	1
Oscilloscope 30 MHz, 2 channels	11459.95	1
Digital Multimeter 2010	07128.00	1
Screened cable, BNC, $l = 750$ mm	07542.11	4
Adapter BNC socket/4 mm plug pair	07542.27	1
Connecting cable, 4 mm plug, 32 A, blue, $l = 50$ cm	07361.04	3
Connecting cable, 4 mm plug, 32 A, red, $l = 50$ cm	07361.01	2
Connecting cable, 4 mm plug, 32 A, yellow, $l = 50$ cm	07361.02	2

## Options:

Teslameter, digital	13610.93	1
Hall probe, tangential, protective cap	13610.02	1

**Complete Equipment Set, Manual on CD-ROM included**  
**Electron spin resonance** P2511200



Electron spin resonance (ESR), model experiment.

## Tasks:

With ESR on a DPPH specimen determination of

1. the  $g$ -factor of the free electron, and
2. the half-width of the absorption line.