

Reagents used in our experiments

1. Reagents for determining iron Chelation Capacity

- Dimethyl sulfoxide, DMSO (Merck, KgaA, Darmstadt, Germany)
- 0.1 M Acetate Buffer, pH 5.25
- Iron(II) sulfate heptahydrate (Merck, KgaA, Darmstadt, Germany)
- 2 mM Iron(II) sulfate in 0.2 M HCl
- Ferrozine (sodium salt of 3-(2-pyridyl)-5,6-diphenyl-1,2,4-triazine-4',4'' disulfonic acid) (Fluka, Sigma-Aldrich, Steinheim, Germany)
- 5 mM Ferrozine Solution
- Hydrochloric Acid (Merck)
- UV-VIS Spectrophotometer ABL & E Jasco V-550 (Tokyo, Japan)
- pH Meter Hanna Instruments pH210, Microprocessor pH-meter
- Vortex Mixer Velp Scientifica (Usmate Velate, Italy)
- Ultra Clear TWF Water Purification System
- Test samples - solutions obtained by dissolving dried extracts in DMSO – hydroalcoholic extracts (E1, E2, E3), extracts in acetone:ethanol (7:3) acidified (A1, A2, A3); solution concentration for analysis: 0.078125-10 mg/mL

2. Reagents for determining the Hydroxyl Radical Scavenging Capacity

- Dimethyl sulfoxide (Merck, KgaA, Darmstadt, Germany)
- Ferrous sulfate heptahydrate (Merck, KgaA, Darmstadt, Germany)
- 1.5 mM ferrous sulfate solution in distilled water
- 6 mM hydrogen peroxide solution in distilled water (Sigma-Aldrich, Steinheim, Germany)
- 20 mM sodium salicylate solution in distilled water
- Hanna Instruments pH210 Microprocessor pH-meter (Padova, Italy)
- Velp Scientifica Vortex agitator (Usmate Velate, Italy)
- Ultra Clear TWF water purification apparatus (Günzburg, Germany)
- ABL & E Jasco V-550 UV-VIS spectrophotometer (Tokyo, Japan)
- Test samples - solutions obtained by dissolving dry extracts in DMSO – hydroalcoholic extracts (E1, E2, E3), extracts in acetonitrile: ethanol 7:3 acidic mixture (A1, A2, A3); concentration of analyzed solutions: 0.078125-10 mg/mL.

3. Reagents for determining the scavenging capacity of the superoxide radical anion

- dimethyl sulfoxide (Merck, KgaA, Darmstadt, Germany),
- TRIS (Sigma-Aldrich, Steinheim, Germany),
- TRIS buffer pH 8 - 0.4845 g of TRIS dissolved in 180 mL of distilled water, adjusted to pH 8 with 6M HCl solution, and completed with distilled water to 200 mL,
- reduced nicotinamide adenine dinucleotide sodium salt (NADHNa₂) (Sigma-Aldrich, Steinheim, Germany),
- 557 µM solution of reduced nicotinamide adenine dinucleotide sodium salt (NADHNa₂) in TRIS buffer pH 8,
- nitroblue tetrazolium (Fluka, Steinheim, Germany),
- 108 µM solution of nitroblue tetrazolium in TRIS buffer pH 8,
- phenazine methosulfate (Fluka, Sigma-Aldrich, Steinheim, Germany),
- 45 µM solution of phenazine methosulfate in TRIS buffer pH 8,
- pH meter Hanna Instruments pH210, Microprocessor pH-meter (Padova, Italy),
- Vortex mixer Velp Scientifica (Usmate Velate, Italy),
- Ultra Clear TWF water purification apparatus (Günzburg, Germany),
- UV-VIS spectrophotometer ABL & E Jasco V-550 (Tokyo, Japan),
- test samples - solutions obtained by dissolving dried extracts in DMSO – hydroalcoholic extracts (E1, E2, E3), extracts in a mixed solution of acetic acid: ethanol 7:3 (A1, A2, A3); concentration of the analyzed solutions: 0.078125-10 mg/mL.

4. Reagents for determining the lipoxygenase inhibition capacity of *Perilla frutescens* extracts

- Dimethyl sulfoxide (DMSO) (Merck, KGaA, Darmstadt, Germany),
- M borate buffer pH 9 - Dissolve 6.2 g of boric acid in 950 mL of distilled water, adjust to pH 9 with 1M NaOH, and make up to 1000 mL with distilled water,
- Linoleic acid (Sigma-Aldrich, Steinheim, Germany) 0.16 mM in 0.1M borate buffer pH 9,
- Soybean lipoxygenase (Sigma-Aldrich, Steinheim, Germany) in 0.1M borate buffer pH 9,
- UV-VIS spectrophotometer ABL & E Jasco V-550 (Tokyo, Japan),
- pH meter Hanna Instruments pH210, Microprocessor pH-meter (Padova, Italy),
- Vortex mixer Velp Scientifica (Usmate Velate, Italy),
- Ultra Clear TWF water purification system (Günzburg, Germany),
- Test samples - solutions obtained by dissolving dried extracts in DMSO – hydroalcoholic extracts (E1, E2, E3), extracts in a mixture of acidic acetone:ethanol 7:3 (A1, A2, A3); concentration of the analyzed solutions: 0.078125-10 mg/mL.

5. Reagents for determining *in vitro* cytotoxicity tests and antitumor action of *Perilla* leaves extracts

- Culture medium - DMEM (Dulbecco's Modified Eagle's Medium - high glucose with L-glutamate and pyruvate), Sigma-Aldrich, Germany.
- Porcine pancreas trypsin, CAS: 9002-07-7, molecular weight 23.8 kDa, Sigma-Aldrich, Germany.
- Penicillin/streptomycin/neomycin mixture - P/S/N, 5,000 units of penicillin, 5 mg of streptomycin, and 10 mg/mL of neomycin, Sigma-Aldrich, Germany.
- MTT [(3-[4,5-dimethylthiazol-2-yl]-2,5-diphenyl) tetrazolium bromide] - C₁₈H₁₆BrN₅S, CAS: 298-93-1, molecular weight 414.32, Sigma-Aldrich, Germany.
- Calcein AM solution, 4 mM in DMSO, min. 90% (HPLC), 100 µL. • Fetal bovine serum - FBS, Sigma-Aldrich, Germany.
- Hanks' Balanced Salt Solution (HBSS) - phenol red-free, without calcium chloride and magnesium sulfate, Sigma-Aldrich, Germany.
- Hanks' Balanced Salt Solution (HBSS) - with calcium chloride and magnesium sulfate, phenol red-free, Sigma-Aldrich, Germany.
- Dimethyl sulfoxide - DMSO, Sigma-Aldrich, Germany.