**Product sheet**

# McCoys 5A medium (modified), w: 3.0 g/L Glucose, w: stable Glutamine, w: 2.0 mM Sodium pyruvate, w: 2.2 g/L NaHCO3 | 820200a

McCoy's 5A Medium is a highly recommended and specialized medium designed to facilitate the growth and replication of viruses in primary cell cultures. It has gained significant recognition for its exceptional performance in various biological research applications.

One prominent application of McCoy's 5A Medium is its utilization in the culturing of human colon carcinoma cell lines. Specifically, it has been employed in the study of the leucine-rich repeat-containing G-protein-coupled receptor (LGR5) and its role in the metastasis of colon cancer. This medium has been effectively employed in the cultivation of several colon carcinoma cell lines, including HCT116, RKO, FET, CBS, HCT116b, and TENN, enabling researchers to delve deeper into the mechanisms underlying colon cancer metastasis.

In addition to its application in cancer research, McCoy's 5A Medium has proven to be indispensable in the study of osteoblasts. Researchers investigating the ion reactivity of calcium-deficient hydroxyapatite in standard cell culture media have utilized this medium to culture osteoblasts. This application has facilitated a better understanding of the interactions between osteoblasts and calcium-deficient hydroxyapatite, contributing to advancements in the field of bone research.

Notably, McCoy's 5A Medium was meticulously formulated by modifying the amino acids found in Basal Medium Eagle to provide optimal support for liver tumor cells. This enriched formulation enables its suitability for a diverse range of established cell lines, as well as primary cells, further enhancing its versatility and applicability in various research settings.

Moreover, McCoy's 5A Medium extends its biochemical and physiological effects beyond liver tumor cells. It has been successfully employed to support growth in primary cultures of bone marrow, skin, gingiva, kidney, omentum, adrenal, lung, spleen, rat embryo, and other cell types. This wide range of applications attests to the broad utility of McCoy's 5A Medium in supporting the growth and maintenance of various cell types for comprehensive biological research.

## Formulation

This McCoy's 5A medium (modified) contains 3.0 g/L of Glucose, stable Glutamine, 2.0 mM of Sodium pyruvate, and 2.2 g/L of NaHCO3.

### Quality control

- pH = 7.2 +/- 0.02 at 20-25°C.
- Each lot has been tested for sterility and absence of mycoplasma and bacteria.

### Maintenance

- Keep refrigerated at +2°C to +8°C in the dark. Freezing and warming up to +37° C minimize the quality of the product.
- Do not heat the medium to more than 37° C or use uncontrollable sources of heat (e.g., microwave appliances).
- If only a part of the medium is to be used, remove this amount from the bottle and warm it up at room temperature.
- Shelf life for any medium except for the basic medium is 8 weeks from the date of manufacture.

## Composition

| | Components | mg/L |
|---|---|---|
| Inorganic Salts | Calcium chloride x 2H2O | 132,46 |
| | Magnesium sulfate x 7H2O | 200,00 |
| | Potassium chloride | 400,00 |
| | Sodium chloride | 6,460.00 |

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| | | |
|---|---|---|
| | Sodium dihydrogen phosphate x H2O | 580,00 |
| Other Components | D(+)-Galactose anhydrous | 3,000.00 |
| | Glutathione (red.) | 0,50 |
| | Bacto-Peptone | 600,00 |
| | Phenol red | 10,00 |
| Amino Acids | L-Alanine | 13,36 |
| | L-Arginine x HCl | 42,10 |
| | L-Asparagine x H2O | 45,00 |
| | L-Aspartic acid | 19,97 |
| | L-Cysteine | 24,24 |
| | L-Glutamine stable | 326,61 |
| | L-Glutamic acid | 22,10 |
| | Glycine | 7,50 |
| | L-Histidine x HCl x H2O | 20,76 |
| | L-Hydroxyproline | 19,70 |
| | L-Isoleucine | 39,36 |
| | L-Leucine | 39,36 |
| | L-Lysine x HCl | 36,50 |
| | L-Methionine | 14,90 |
| | L-Phenylalanine | 16,50 |

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| | | |
|---|---|---|
| | L-Proline | 17,30 |
| | L-Serine | 26,30 |
| | L-Threonine | 17,90 |
| | L-Tryptophan | 3,10 |
| | L-Tyrosine | 18,10 |
| | L-Valine | 17,60 |
| Vitamins | p-Aminobenzoic acid | 1,00 |
| | Ascorbic acid | 0,50 |
| | D(+)-Biotin | 0,20 |
| | D-Calcium pantothenate | 0,20 |
| | Choline chloride | 5,00 |