Dated website – 14/7/08

WI-38 (Lung, diploid, human)

The WI-38 human diploid cell line was derived by L. Hayflick from normal embryonic (3-month gestation) lung tissue of a female (Exp. Cell Res. 25: 585, 1961). The growth medium used was Eagle's medium in Earle's balanced salt solution supplemented with 10% calf serum. The cells have a finite lifetime of 50 (plus or minus 10) population doublings with a doubling time of 24 hours (Exp. Cell Res. 37: 614, 1965). The cell line has been shown to have one of the broadest human virus spectra of any cell population that has been tested and is especially useful for isolation of rhinoviruses.

Culture Medium
Minimum essential medium (Eagle), with 10% heat-inactivated fetal bovine serum.

Growth Characteristics
Cells seeded at a concentration of 4x104 cells/cm2 in the above culture medium will be 100% confluent in 7 days.

Plating Efficiency
Approximately 10%.

Morphology
Fibroblast-like.

Karyology
Chromosome Frequency Distribution 50 Cells: 2n = 46.

Species
Confirmed as human by starch-gel electrophoresis analysis of LDH and G6PD isoenzymes.

Common Utilization
Supports the growth of a broad range of viruses, including Adenoviruses; Coxsackie A; Cytomegalovirus; Echovirus; Herpes simplex Virus; Poliovirus; Respiratory Syncytial Virus; Rhinovirus; and Varicella Zoster Virus. Also used for in vitro cytotoxicity testing.