

Terminology

A: Activity

A_1 : Area of Wall 1

A_2 : Area of Wall 2

A_3 : Area of Wall 3

A_4 : Area of Wall 4

A_5 : Area of Ceiling

A_6 : Area of Floor

A_{ma} : Area of the outer maze wall

A_{mb} : Area of the inner maze wall

A_{m1a} : First section of the outer maze wall involved in scattering

A_{m2a} : Second section of the outer maze wall involved in scattering

A_{m1b} : First section of the inner maze wall involved in scattering

A_{m2b} : Second section of the inner maze wall involved in scattering

C: Contamination Factor

D: Dose per patient

\dot{D} : Dose per minute/ Dose Rate

d_1 : Distance of source to Wall 1

d_2 : Distance of source to Wall 2

d_3 : Distance of source to Wall 3

d_4 : Distance of source to Wall 4

d_5 : Distance of source to Wall 5

d_6 : Distance of source to Wall 6

d_{d1} : Direct distance of source from first maze entrance

d_{d2} : Direct distance of source from second maze entrance

d_{m1} : Distance of source from first maze leg

d_{m2} : Length of the first maze length until second leg maze or maze entrance

d_{m3} : Length of second maze length until maze entrance

P: Design Limit of the respective wall

P_{m1} : Design Limit of neighbouring room to the outer maze wall

P_{m2} : Design Limit of neighbouring room to the second maze wall or design limit at the maze entrance

P_{m3} : Design Limit at the maze entrance

P_{e1} : Design Limit of the neighbouring to the edge of walls 1 and 2 room

P_{e2} : Design Limit of the neighbouring to the edge of walls 1 and 4 room

P_{e3} : Design Limit of the neighbouring to the edge of walls 1 and 5 room

P_{e4} : Design Limit of the neighbouring to the edge of walls 1 and 6 room

P_{e5} : Design Limit of the neighbouring to the edge of walls 2 and 3 room

P_{e6} : Design Limit of the neighbouring to the edge of walls 2 and 5 room

P_{e7} : Design Limit of the neighbouring to the edge of walls 2 and 6 room

P_{e8} : Design Limit of the neighbouring to the edge of walls 3 and 4 room

P_{e9} : Design Limit of the neighbouring to the edge of walls 3 and 5 room

P_{e10} : Design Limit of the neighbouring to the edge of walls 3 and 6 room

P_{e11} : Design Limit of the neighbouring to the edge of walls 4 and 5 room

P_{e12} : Design Limit of the neighbouring to the edge of walls 4 and 6 room

P_{c1} : Design Limit of the neighbouring to the corner of walls 1, 2 and 5 room

P_{c2} : Design Limit of the neighbouring to the corner of walls 1, 2 and 6 room

P_{c3} : Design Limit of the neighbouring to the corner of walls 1, 4 and 5 room

P_{c4} : Design Limit of the neighbouring to the corner of walls 1, 4 and 6 room

P_{c5} : Design Limit of the neighbouring to the corner of walls 2, 3 and 5 room

P_{c6} : Design Limit of the neighbouring to the corner of walls 2, 3 and 6 room

P_{c7} : Design Limit of the neighbouring to the corner of walls 3, 4 and 5 room

P_{c8} : Design Limit of the neighbouring to the corner of walls 3, 4 and 6 room

T: Occupation Factor

#S: Number of sources

S: Source

W: Workload

$Tr_{\text{per week}}$: Number of treatments/patients per week

Pt.Att.: Patient Attenuation Factor

IDR: Instantaneous Dose Rate

NoMaze: Brachytherapy room with no mazes

OneLeg: Brachytherapy room with one maze leg

TwoLeg: Brachytherapy room with two maze legs

θ_{o1} : Incident angle of first scatter

θ_{o2} : Incident angle of second scatter

θ_{r1} : Reflecting angle of first scatter

θ_{r2} : Reflecting angle of second scatter

Pb Pr.: Lead Price per Kg

Stl Pr.: Steel Price per Kg

ConcBa: Concrete Baryte Price per Kg