

RadCalc's superficial calculations provide the follow features:

- Prescriptions can be defined
 - Isodose line or depth of treatment can be specified
- Multiple beams can be added
 - Superficial energy and cone can be chosen
 - Cutout information can be specified
 - Visual display of cone and cutout is provided
 - Stand Off can be included in inverse square correction
 - Thickness of backscatter material is specifiable
 - Calculations results indicated in MU or Time

RadCalc allows the user to define the following items within Physics Setup:

- Superficial Cones
 - Square, Rectangle, Circle, and Oval shapes are allowed
 - Standard SSD can be defined
 - Minimum allowed cutout diameter can be specified
- Superficial Energies
 - Specify reference conditions
 - Indicate use of Monitor Units or Time for delivery parameter
 - Add allowed treatment SSDs per energy
 - Enter cone factors for each energy
- Backscatter Factors
 - Enter energy specific data for each allowed SSD
 - Data can be dependent upon backscatter material thickness
- PDD Data
 - Data is energy dependent
 - Data is also radii and SSD dependent

The screenshots illustrate the following features and data:

- Superficial Calculation Window:** Shows prescription details (Rx 1, 200.0 cGy) and beam setup parameters (Machine: XSTRAL 200, Energy: 1mm Al, Nominal HVL: 1.00, Surface Dose: 40.00, SSD: 20.00, Stand Off: 0.00). It includes a visual diagram of a circular cone and a table of backscatter thickness information.
- Physics Setup - Superficial Cones:** A table listing 14 different cone configurations with their respective shapes, dimensions, and standard SSDs.

Cone Name	Cone Shape	Width (cm)	Length (cm)	Diameter (cm)	Standard SSD (cm)	Min. Cutout Diameter (cm)
1. 2cm diameter	Circle			2.00	20.00	1.00
2. 3cm diameter	Circle			3.00	20.00	1.00
3. 4cm diameter	Circle			4.00	20.00	1.00
4. 5cm diameter	Circle			5.00	20.00	1.00
5. 6cm diameter	Circle			6.00	20.00	1.00
6. 8cm diameter	Circle			8.00	20.00	1.00
7. 4 x 6cm	Rectangle	4.00	6.00		30.00	1.50
8. 8 x 10cm	Rectangle	8.00	10.00		30.00	1.50
9. 10 x 14cm	Rectangle	10.00	14.00		30.00	1.50
10. 10cm diameter	Circle			10.00	30.00	1.50
11. 12cm diameter	Circle			12.00	30.00	1.50
12. 17cm diameter	Circle			17.00	30.00	1.50
13. 12 x 15cm	Rectangle	12.00	15.00		50.00	5.00
14. 10 x 20cm	Rectangle	10.00	20.00		50.00	5.00

- Physics Setup - Superficial Energies:** Shows reference values (Nominal HVL: 1.00, Energy Value: 40.00, Amperage: 20.00) and a list of allowed SSDs for treatment (20.00, 30.00).
- Physics Setup - Backscatter Factors:** A table showing BSF factors for selected SSDs (30.00cm) across various thicknesses (0.0 to 10.0 cm).

Thickness (cm)	0.0	0.5	1.0	1.5	2.0	3.0	4.0	5.0	7.0	10.0
0.00	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884	0.884
0.25	0.884	0.895	0.899	0.903	0.903	0.903	0.903	0.903	0.903	0.903
0.50	0.884	0.905	0.914	0.921	0.922	0.922	0.922	0.922	0.922	0.922
1.00	0.884	0.916	0.933	0.945	0.950	0.950	0.950	0.950	0.950	0.950
1.25	0.884	0.916	0.937	0.952	0.958	0.958	0.958	0.958	0.958	0.958
1.50	0.884	0.920	0.940	0.958	0.967	0.967	0.967	0.967	0.967	0.967
2.50	0.884	0.919	0.942	0.966	0.983	0.983	0.983	0.983	0.983	0.983
3.00	0.884	0.919	0.941	0.966	0.984	0.984	0.984	0.984	0.984	0.984
3.00	0.884	0.918	0.941	0.966	0.986	0.986	0.986	0.986	0.986	0.986

- Physics Setup - Superficial PDD Data File Editor:** Displays a graph of PDD vs Depth (cm) and a table of PDD data for selected curves.

Depth (cm)	PDD
1.00	100.000
2.10	92.000
3.00	84.900
4.00	77.900
5.00	71.300
6.00	65.300
7.00	59.500