

Table 1. Stiffness (N/mm) Data of 5 Tests

	Prostheses 1: FDE	Prostheses 1: PSF	Prostheses 1: UDE	Prostheses 2: FDE	Prostheses 2: PSF
Stiffness at 1950N (1500N UDE)	60	58	34	48	42
Average Stiffness of Total Load Cycle (N/mm)	51	30	26	39	26
Percentage increase of Peak Load Stiffness over Average Stiffness	18	93	31	23	61
CV (%) of Stiffness at 1950N	0.6	0.5	0.2	1.1	0.2
CV (%) of Average Stiffness of Total Load Cycle	1.6	0.9	0.6	1.7	0.1

Table 2. Prosthesis 2 - FDE test 3500N loading and prediction

Data Set	Sample	Stiffness (N/mm)
1 st Experiment FDE Test	Average stiffness of 0-1950N sample	39
	Actual stiffness at 1950N loading	48
2 nd Experiment FDE Test	Average stiffness of 0-1950N sample	37
	Actual stiffness at 1950N loading	45
	Actual Stiffness at 3500N loading	53
Predictive Stiffness @3500N	2 nd Order Polynomial Trend line	55
	1500-1950N Loading Linear Trend Line	49

Figure 1. Prosthesis Design Test Piece



Figure 2. Prosthesis Loading Test Machine



Figure 3. Testometric Loading Formats

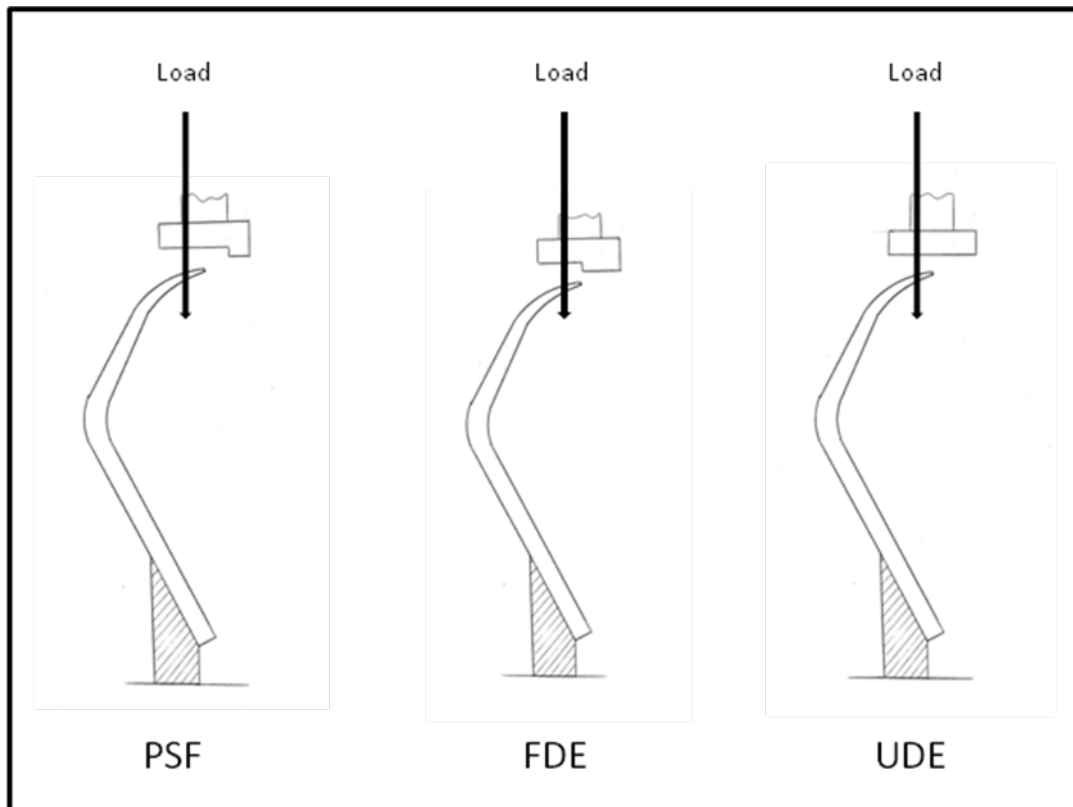


Figure 4. Prosthesis 1- FDE test

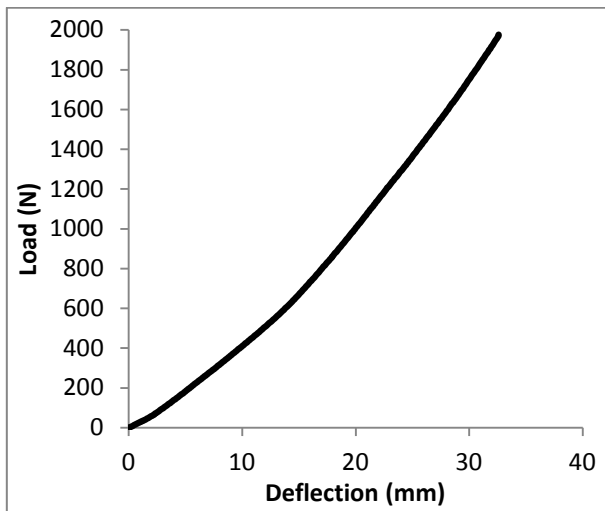


Figure 5. Prosthesis 2- FDE test

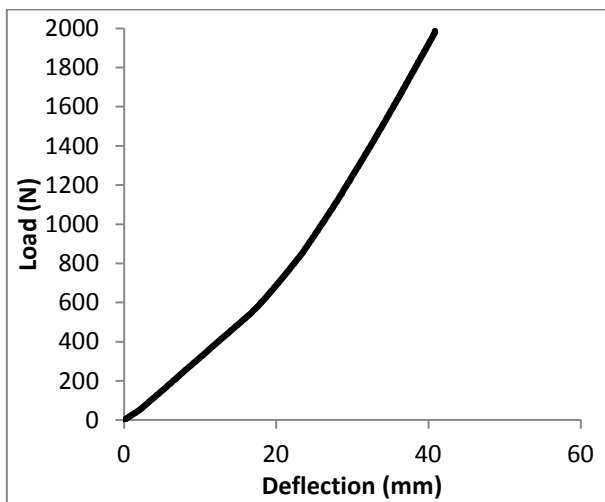


Figure 6. Prosthesis 1- PSF test

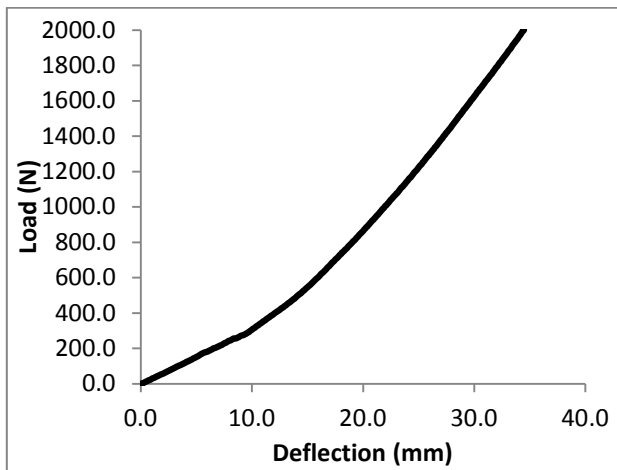


Figure 7. Prosthesis 2- PSF test

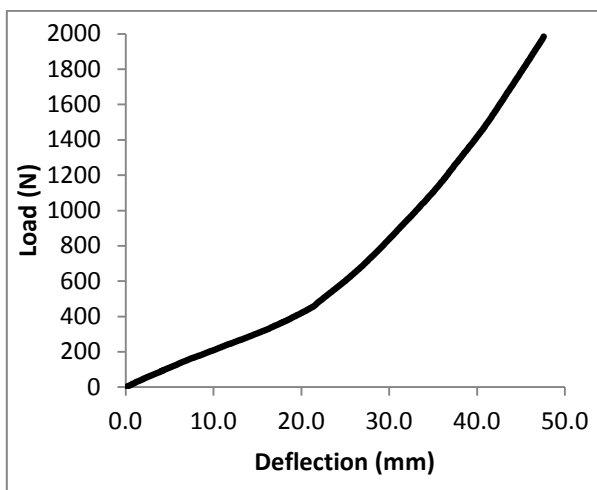


Figure 8. Prosthesis 1- UDE test

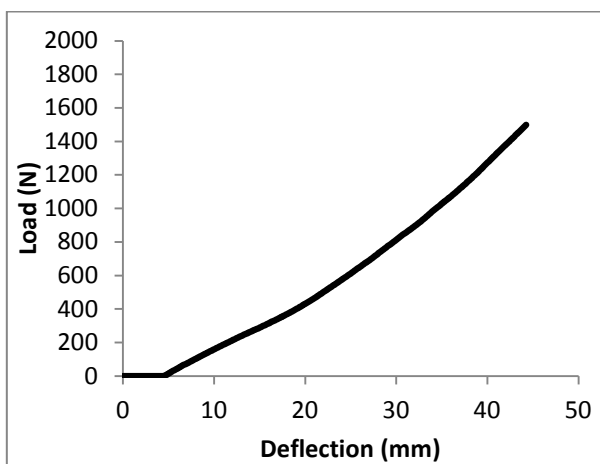


Figure 9. 2nd Order Polynomial and 450N Linear 3500N Predictive Load Examples.

