

Gauge Repeatability and Reproducibility Data Sheet

	Gauge Name	Appraiser A
Part Name		
	Gauge Type	Appraiser C
	Parts	Date Performed

APPRAISER/ TRIAL #	PARTS										STATISTICS
	1	2	3	4	5	6	7	8	9	10	
1.											
2,											
3,											
											$X_a =$
											$r_a =$
1.											
2,											
3,											
											$X_b =$
											$r_b =$
1.											
2,											
3,											
											$X_c =$
											$r_c =$
											$X =$
											$R_p =$
											$R =$
											$X_{DIFF} =$
											$UCL_R =$
* $UCL_R = R \times D_4 =$											
Notes:											

Gauge Repeatability and Reproducibility Report

Part Number	gauge Name	Appraiser A	
Part Name			
	gauge Type	Appraiser C	
		Parts	Date Performed

Measurement and Analysis				% Total Variation (TV)																					
Repeatability: Appraiser Variation (EV) $EV = \sqrt{\frac{MSR}{r}}$ EV = EV =		<table border="1"> <thead> <tr> <th>Trial</th> <th>K1</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>0,8865</td> </tr> <tr> <td>3</td> <td>0,5907</td> </tr> </tbody> </table>	Trial	K1	2	0,8865	3	0,5907	% EV	=															
Trial	K1																								
2	0,8865																								
3	0,5907																								
Reproducibility: Appraiser Variation (AV) $AV = \sqrt{\frac{MSA}{n}}$ AV = AV =		<table border="1"> <thead> <tr> <th>Appraisers</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>K₂</td> <td>0,7087</td> <td>0,5236</td> </tr> </tbody> </table>	Appraisers	2	3	K ₂	0,7087	0,5236	% AV	=	100 (AV/TV)														
Appraisers	2	3																							
K ₂	0,7087	0,5236																							
Repeatability & Reproducibility (GRR) $GRR = \sqrt{EV^2 + AV^2}$ GRR = GRR =		<table border="1"> <thead> <tr> <th>Parts</th> <th>K₃</th> </tr> </thead> <tbody> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> <tr><td>5</td><td></td></tr> <tr><td>6</td><td></td></tr> <tr><td>7</td><td></td></tr> <tr><td>8</td><td></td></tr> <tr><td>9</td><td></td></tr> <tr><td>10</td><td></td></tr> </tbody> </table>	Parts	K ₃	2		3		4		5		6		7		8		9		10		% GRR	=	
Parts	K ₃																								
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3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
Part Variation (PV) $PV = \sqrt{MSR}$ PV = PV =			% PV	=																					
Total Variation (TV) $TV = \sqrt{MSD}$ TV = TV =			ndc	=	1.41(PV/GRR)																				
See information on the theory and statistics used in the form on the back of gauge procedure.																									