**Appendix 1**

**Individual animal Weekly body weight data of Male Rats (gms)**

**Group I (Vehicle Control)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **1st** | **2nd** | **3rd** | **4th** | **5 th** | **6 th** | **7 th** | **8 th** | **9 th** | **10 th** | **11 th** | **12 th** | **13 th** |
| **101** | 280 | 367 | 379 | 398 | 410 | 416 | 430 | 424 | 425 | 433 | 438 | 444 | 454 |
| **102** | 320 | 328 | 344 | 355 | 370 | 421 | 386 | 392 | 401 | 408 | 418 | 356 | 358 |
| **103** | 354 | 388 | 408 | 431 | 438 | 450 | 424 | 435 | 446 | 463 | 465 | 480 | 487 |
| **104** | 285 | 323 | 343 | 365 | 372 | 380 | 378 | 407 | 438 | 392 | 402 | 437 | 438 |
| **105** | 294 | 296 | 316 | 328 | 336 | 394 | 400 | 376 | 438 | 448 | 423 | 407 | 410 |
| **106** | 273 | 301 | 320 | 334 | 350 | 405 | 406 | 375 | 378 | 428 | 435 | 372 | 376 |
| **107** | 235 | 254 | 272 | 290 | 312 | 313 | 320 | 336 | 347 | 365 | 374 | 421 | 431 |
| **108** | 277 | 304 | 336 | 364 | 390 | 358 | 372 | 410 | 408 | 414 | 418 | 415 | 422 |
| **109** | 216 | 232 | 263 | 285 | 308 | 322 | 326 | 339 | 340 | 344 | 347 | 437 | 478 |
| **110** | 187 | 235 | 278 | 312 | 336 | 362 | 380 | 395 | 408 | 420 | 423 | 444 | 451 |
| **Group II (3 mg/kg Bw)** | | |  |  |  |  |  |  |  |  |  |  |  |
| **Animal ID** | **1st** | **2nd** | **3rd** | **4th** | **5 th** | **6 th** | **7 th** | **8 th** | **9 th** | **10 th** | **11 th** | **12 th** | **13 th** |
| **201** | 316 | 339 | 359 | 376 | 388 | 404 | 410 | 412 | 424 | 427 | 429 | 426 | 428 |
| **202** | 223 | 362 | 388 | 413 | 432 | 442 | 456 | 464 | 469 | 477 | 478 | 494 | 508 |
| **203** | 277 | 312 | 341 | 368 | 387 | 398 | 417 | 435 | 445 | 448 | 451 | 475 | 481 |
| **204** | 296 | 322 | 342 | 355 | 368 | 388 | 384 | 480 | 382 | 401 | 405 | 410 | 420 |
| **205** | 312 | 330 | 351 | 368 | 370 | 380 | 360 | 360 | 379 | 391 | 397 | 410 | 412 |
| **206** | 294 | 319 | 334 | 358 | 374 | 382 | 398 | 392 | 397 | 412 | 414 | 429 | 436 |
| **207** | 196 | 328 | 264 | 296 | 317 | 335 | 350 | 365 | 369 | 382 | 388 | 397 | 412 |
| **208** | 250 | 371 | 302 | 320 | 339 | 350 | 363 | 373 | 374 | 390 | 394 | 409 | 415 |
| **209** | 287 | 328 | 285 | 386 | 407 | 420 | 427 | 444 | 447 | 460 | 463 | 475 | 490 |
| **210** | 227 | 261 | 354 | 308 | 338 | 345 | 361 | 370 | 376 | 392 | 395 | 408 | 411 |
| KEY:ID= Identification | | |  |  |  |  |  |  |  |  |  |  |  |
| **GroupIII (15 mg/kg Bw)** | | | |  |  |  |  |  |  |  |  |  |  |
| **Animal ID** | **1st** | **2nd** | **3rd** | **4th** | **5 th** | **6 th** | **7 th** | **8 th** | **9 th** | **10 th** | **11 th** | **12 th** | **13 th** |
| **301** | 368 | 369 | 418 | 434 | 456 | 414 | 480 | 385 | 493 | 302 | 506 | 504 | 504 |
| **302** | 335 | 308 | 346 | 367 | 392 | 474 | 416 | 370 | 428 | 390 | 396 | 450 | 467 |
| **303** | 304 | 328 | 330 | 362 | 369 | 380 | 385 | 420 | 386 | 438 | 442 | 403 | 409 |
| **304** | 381 | 316 | 344 | 372 | 398 | 416 | 424 | 424 | 432 | 448 | 450 | 460 | 460 |
| **305** | 394 | 323 | 308 | 338 | 369 | 395 | 396 | 408 | 414 | 430 | 433 | 434 | 446 |
| **306** | 370 | 293 | 310 | 343 | 354 | 370 | 395 | 395 | 404 | 413 | 417 | 415 | 434 |
| **307** | 264 | 302 | 309 | 332 | 368 | 380 | 380 | 385 | 396 | 382 | 383 | 414 | 415 |
| **308** | 259 | 299 | 307 | 332 | 350 | 366 | 376 | 375 | 376 | 407 | 408 | 407 | 420 |
| **309** | 223 | 283 | 315 | 350 | 382 | 368 | 390 | 405 | 420 | 338 | 440 | 465 | 472 |
| **310** | 199 | 249 | 285 | 322 | 349 | 403 | 420 | 420 | 424 | 435 | 438 | 446 | 454 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Group IV (30 mg/kg Bw)** | | | |  |  |  |  |  |  |  |  |  |  |
| **Animal ID** | **1st** | **2nd** | **3rd** | **4th** | **5 th** | **6 th** | **7 th** | **8 th** | **9 th** | **10 th** | **11 th** | **12 th** | **13 th** |
| **401** | 324 | 378 | 384 | 410 | 432 | 394 | 452 | 460 | 470 | 458 | 461 | 491 | 504 |
| **402** | 322 | 338 | 342 | 368 | 378 | 382 | 384 | 382 | 388 | 390 | 395 | 401 | 412 |
| **403** | 302 | 345 | 354 | 374 | 389 | 443 | 394 | 400 | 411 | 404 | 407 | 434 | 438 |
| **404** | 286 | 326 | 356 | 382 | 410 | 416 | 424 | 430 | 442 | 450 | 454 | 448 | 450 |
| **405** | 293 | 292 | 301 | 320 | 340 | 357 | 365 | 365 | 378 | 388 | 393 | 388 | 400 |
| **406** | 304 | 349 | 375 | 403 | 418 | 393 | 453 | 400 | 480 | 430 | 436 | 451 | 457 |
| **407** | 263 | 299 | 330 | 356 | 374 | 395 | 400 | 450 | 414 | 452 | 455 | 448 | 460 |
| **408** | 266 | 303 | 332 | 355 | 377 | 438 | 400 | 420 | 424 | 396 | 399 | 449 | 470 |
| **409** | 209 | 261 | 284 | 329 | 354 | 380 | 396 | 410 | 422 | 434 | 440 | 449 | 468 |
| **410** | 197 | 246 | 266 | 306 | 343 | 368 | 384 | 400 | 412 | 428 | 431 | 446 | 450 |
| KEY:ID= Identification | | |  |  |  |  |  |  |  |  |  |  |  |
| **Group V (30 mg/kg Bw)** | | | |  |  |  |  |  |  |  |  |  |  |
| **Animal ID** | **1st** | **2nd** | **3rd** | **4th** | **5 th** | **6 th** | **7 th** | **8 th** | **9 th** | **10 th** | **11 th** | **12 th** | **13 th** |
| **501** | 332 | 350 | 376 | 388 | 408 | 405 | 412 | 384 | 388 | 396 | 400 | 404 | 420 |
| **502** | 338 | 327 | 343 | 361 | 378 | 353 | 354 | 370 | 388 | 406 | 408 | 419 | 428 |
| **503** | 314 | 340 | 368 | 374 | 394 | 400 | 420 | 435 | 448 | 461 | 466 | 468 | 457 |
| **504** | 293 | 320 | 346 | 362 | 387 | 396 | 413 | 425 | 428 | 428 | 432 | 459 | 470 |
| **505** | 286 | 327 | 367 | 381 | 399 | 409 | 418 | 436 | 433 | 447 | 451 | 446 | 458 |

KEY:ID= Identification

**Appendix 1 (Contd….)**

**Individual animal Weekly body weight data of Females (gms)**

**Group I (Vehicle Control)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **1st** | **2nd** | **3rd** | **4th** | **5 th** | **6 th** | **7 th** | **8 th** | **9 th** | **10 th** | **11 th** | **12 th** | **13 th** |
| **151** | 226 | 238 | 252 | 253 | 266 | 272 | 275 | 287 | 288 | 290 | 300 | 324 | 317 |
| **152** | 194 | 214 | 214 | 238 | 246 | 248 | 240 | 254 | 247 | 251 | 247 | 252 | 254 |
| **153** | 198 | 212 | 228 | 239 | 339 | 228 | 254 | 38 | 258 | 262 | 296 | 284 | 277 |
| **154** | 174 | 201 | 206 | 225 | 225 | 289 | 235 | 329 | 238 | 244 | 424 | 238 | 247 |
| **155** | 195 | 223 | 230 | 256 | 268 | 257 | 288 | 396 | 302 | 306 | 314 | 318 | 320 |
| **156** | 170 | 196 | 211 | 238 | 253 | 239 | 270 | 278 | 284 | 286 | 288 | 288 | 290 |
| **157** | 168 | 182 | 200 | 221 | 237 | 212 | 253 | 256 | 266 | 270 | 274 | 250 | 269 |
| **158** | 137 | 157 | 174 | 190 | 208 | 210 | 223 | 227 | 230 | 235 | 262 | 280 | 236 |
| **159** | 138 | 160 | 182 | 174 | 198 | 248 | 224 | 224 | 232 | 234 | 243 | 244 | 214 |
| **160** | 116 | 135 | 157 | 159 | 182 | 195 | 204 | 209 | 218 | 220 | 219 | 227 | 230 |
| **Group II (3 mg/kg Bw)** | | |  |  |  |  |  |  |  |  |  |  |  |
| **Animal ID** | **1st** | **2nd** | **3rd** | **4th** | **5 th** | **6 th** | **7 th** | **8 th** | **9 th** | **10 th** | **11 th** | **12 th** | **13 th** |
| **251** | 224 | 234 | 237 | 248 | 245 | 258 | 248 | 251 | 258 | 261 | 269 | 261 | 268 |
| **252** | 193 | 224 | 235 | 246 | 246 | 262 | 250 | 252 | 266 | 267 | 271 | 276 | 269 |
| **253** | 189 | 207 | 228 | 238 | 240 | 246 | 254 | 260 | 259 | 263 | 272 | 272 | 274 |
| **254** | 182 | 200 | 226 | 242 | 250 | 246 | 282 | 288 | 318 | 322 | 331 | 325 | 319 |
| **255** | 169 | 195 | 215 | 227 | 235 | 272 | 257 | 269 | 367 | 269 | 272 | 270 | 277 |
| **256** | 169 | 198 | 218 | 225 | 245 | 248 | 250 | 208 | 211 | 218 | 78 | 270 | 278 |
| **257** | 161 | 187 | 205 | 223 | 229 | 246 | 242 | 243 | 258 | 260 | 265 | 284 | 267 |
| **258** | 137 | 132 | 172 | 193 | 158 | 233 | 207 | 254 | 264 | 266 | 208 | 218 | 218 |
| **259** | 131 | 159 | 181 | 208 | 215 | 208 | 238 | 230 | 246 | 249 | 256 | 254 | 259 |
| **260** | 114 | 136 | 157 | 175 | 187 | 227 | 206 | 207 | 224 | 231 | 223 | 230 | 230 |
| KEY:ID= Identification | | |  |  |  |  |  |  |  |  |  |  |  |
| **Group III (15 mg/kg Bw)** | | |  |  |  |  |  |  |  |  |  |  |  |
| **Animal ID** | **1st** | **2nd** | **3rd** | **4th** | **5 th** | **6 th** | **7 th** | **8 th** | **9 th** | **10 th** | **11 th** | **12 th** | **13 th** |
| **351** | 229 | 250 | 261 | 273 | 283 | 283 | 308 | 317 | 339 | 343 | 329 | 350 | 337 |
| **352** | 194 | 210 | 212 | 248 | 258 | 234 | 237 | 248 | 2525 | 256 | 256 | 259 | 250 |
| **353** | 195 | 212 | 232 | 242 | 228 | 268 | 268 | 269 | 338 | 344 | 280 | 299 | 285 |
| **354** | 183 | 193 | 217 | 224 | 240 | 241 | 258 | 257 | 266 | 269 | 274 | 280 | 274 |
| **355** | 185 | 202 | 210 | 230 | 246 | 262 | 265 | 273 | 275 | 278 | 285 | 286 | 292 |
| **356** | 165 | 180 | 195 | 215 | 216 | 230 | 238 | 240 | 246 | 250 | 268 | 260 | 249 |
| **357** | 159 | 176 | 203 | 224 | 242 | 254 | 259 | 256 | 260 | 262 | 254 | 268 | 268 |
| **358** | 139 | 160 | 183 | 197 | 210 | 226 | 231 | 282 | 240 | 244 | 248 | 254 | 249 |
| **359** | 141 | 163 | 186 | 198 | 203 | 210 | 277 | 238 | 248 | 250 | 249 | 247 | 247 |
| **360** | 153 | 146 | 170 | 199 | 208 | 210 | 224 | 229 | 232 | 234 | 250 | 256 | 254 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Group IV (30 mg/kg Bw)** | | |  |  |  |  |  |  |  |  |  |  |  |
| **Animal ID** | **1st** | **2nd** | **3rd** | **4th** | **5 th** | **6 th** | **7 th** | **8 th** | **9 th** | **10 th** | **11 th** | **12 th** | **13 th** |
| **451** | 226 | 232 | 243 | 254 | 262 | 267 | 270 | 260 | 292 | 298 | 292 | 286 | 282 |
| **452** | 206 | 219 | 233 | 236 | 250 | 256 | 266 | 286 | 268 | 271 | 272 | 270 | 296 |
| **453** | 194 | 209 | 219 | 238 | 245 | 282 | 247 | 264 | 258 | 262 | 273 | 270 | 274 |
| **454** | 195 | 216 | 234 | 260 | 266 | 271 | 285 | 292 | 298 | 299 | 306 | 308 | 303 |
| **455** | 174 | 200 | 223 | 240 | 246 | 237 | 274 | 280 | 284 | 288 | 289 | 290 | 288 |
| **456** | 158 | 180 | 205 | 218 | 226 | 235 | 254 | 240 | 255 | 257 | 267 | 272 | 269 |
| **457** | 153 | 179 | 204 | 208 | 220 | 226 | 240 | 280 | 280 | 283 | 276 | 282 | 259 |
| **458** | 143 | 176 | 185 | 204 | 212 | 216 | 230 | 236 | 240 | 244 | 252 | 260 | 270 |
| **459** | 128 | 148 | 172 | 190 | 202 | 223 | 225 | 220 | 226 | 230 | 235 | 232 | 207 |
| **460** | 123 | 151 | 172 | 198 | 208 | 246 | 237 | 236 | 260 | 264 | 268 | 269 | 270 |
| KEY:ID= Identification | | |  |  |  |  |  |  |  |  |  |  |  |
| **Group V (30 mg/kg Bw)** | | |  |  |  |  |  |  |  |  |  |  |  |
| **Animal ID** | **1st** | **2nd** | **3rd** | **4th** | **5 th** | **6 th** | **7 th** | **8 th** | **9 th** | **10 th** | **11 th** | **12 th** | **13 th** |
| **551** | 215 | 239 | 238 | 246 | 266 | 246 | 273 | 280 | 276 | 279 | 295 | 304 | 299 |
| **552** | 202 | 221 | 234 | 238 | 251 | 280 | 267 | 276 | 272 | 275 | 278 | 272 | 276 |
| **553** | 178 | 209 | 218 | 239 | 245 | 287 | 272 | 274 | 284 | 288 | 280 | 277 | 280 |
| **554** | 172 | 198 | 211 | 223 | 227 | 238 | 246 | 248 | 248 | 251 | 264 | 264 | 268 |
| **555** | 168 | 186 | 207 | 221 | 232 | 242 | 252 | 258 | 263 | 266 | 274 | 274 | 274 |

KEY:ID= Identification

**Appendix 2**

**Individual Animal weekly Feed Consumption of Male Rat (gms)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Cage No.** | **Animal ID** | **1st** | **2nd** | **3rd** | **4th** | **5 th** | **6 th** | **7 th** | **8 th** | **9 th** | **10 th** | **11 th** | **12 th** | **13 th** |
| **1** | 101,102,103 | 59.883 | 61.529 | 61.841 | 58.686 | 58.829 | 59.500 | 61.443 | 57.829 | 54.429 | 60.943 | 64.843 | 49.671 | 61.160 |
| **2** | 104,105 | 36.500 | 39.600 | 38.844 | 43.057 | 41.529 | 39.643 | 40.900 | 42.743 | 44.700 | 42.586 | 45.286 | 32.143 | 38.480 |
| **3** | 106,107,108 | 51.333 | 56.386 | 55.370 | 59.657 | 57.214 | 52.771 | 55.000 | 54.457 | 50.200 | 57.014 | 58.771 | 47.957 | 55.440 |
| **4** | 109,110 | 40.600 | 37.700 | 38.537 | 43.000 | 41.229 | 38.414 | 40.557 | 37.200 | 37.314 | 41.871 | 41.186 | 34.129 | 43.480 |
| **5** | 201,202,203 | 60.217 | 63.486 | 63.817 | 61.957 | 59.657 | 59.786 | 64.371 | 63.043 | 64.743 | 60.957 | 71.786 | 51.271 | 62.920 |
| **6** | 204,205 | 40.467 | 42.629 | 40.247 | 38.543 | 37.671 | 38.643 | 34.771 | 39.471 | 40.986 | 42.329 | 41.343 | 34.457 | 42.280 |
| **7** | 206,207,208 | 53.033 | 56.000 | 56.636 | 59.943 | 58.871 | 54.671 | 58.500 | 56.743 | 57.500 | 62.486 | 65.857 | 48.600 | 58.560 |
| **8** | 209,210 | 42.017 | 41.643 | 43.894 | 44.286 | 42.229 | 48.029 | 41.700 | 41.429 | 45.571 | 48.700 | 43.500 | 35.314 | 40.640 |
| **9** | 301,302,303 | 52.133 | 60.286 | 62.687 | 64.200 | 64.543 | 58.114 | 61.514 | 61.271 | 59.529 | 64.729 | 58.714 | 51.529 | 59.460 |
| **10** | 304,305 | 42.650 | 36.271 | 39.713 | 45.300 | 44.314 | 44.086 | 43.771 | 40.686 | 40.014 | 40.571 | 41.771 | 34.357 | 39.400 |
| **11** | 306,307,308 | 54.317 | 51.871 | 53.666 | 63.986 | 62.100 | 54.871 | 61.771 | 59.143 | 58.214 | 53.343 | 57.314 | 46.300 | 57.380 |
| **12** | 309,310 | 50.133 | 45.929 | 44.486 | 44.029 | 46.629 | 49.814 | 46.029 | 46.543 | 50.600 | 45.271 | 48.000 | 36.586 | 43.880 |
| **13** | 401,402,403, | 63.600 | 47.729 | 68.759 | 65.486 | 60.171 | 50.686 | 60.086 | 61.357 | 61.129 | 62.629 | 66.157 | 49.614 | 62.420 |
| **14** | 404,405 | 36.550 | 39.600 | 38.187 | 44.257 | 42.971 | 44.671 | 41.243 | 40.357 | 41.629 | 40.771 | 46.129 | 38.029 | 40.860 |
| **15** | 406,407,408 | 63.633 | 63.943 | 66.957 | 65.586 | 70.100 | 59.157 | 65.929 | 61.757 | 55.743 | 62.729 | 70.386 | 51.671 | 65.640 |
| **16** | 409,410 | 48.317 | 43.229 | 45.414 | 45.643 | 45.043 | 45.229 | 45.971 | 44.314 | 44.186 | 48.243 | 51.200 | 36.743 | 40.500 |
| **17** | 501,502,503 | 55.350 | 57.443 | 57.714 | 63.129 | 56.943 | 55.457 | 53.957 | 52.814 | 62.343 | 61.814 | 58.771 | 45.214 | 55.940 |
| **18** | 504,505 | 43.283 | 41.929 | 40.860 | 47.057 | 42.329 | 41.286 | 44.714 | 41.414 | 41.600 | 45.571 | 48.657 | 34.386 | 41.900 |

**Appendix 2 (Contd….)**

**Individual Animal weekly Feed Consumption of Female Rat (gms)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Cage No.** | **Animal ID** | **1st** | **2nd** | **3rd** | **4th** | **5 th** | **6 th** | **7 th** | **8 th** | **9 th** | **10 th** | **11 th** | **12 th** | **13 th** |
| **1** | 151,152,153 | 46.820 | 43.686 | 50.814 | 46.314 | 48.429 | 43.657 | 42.643 | 41.871 | 47.171 | 52.100 | 45.667 | 47.314 | 38.433 |
| **2** | 154,155 | 31.360 | 33.443 | 33.357 | 32.957 | 30.271 | 35.800 | 31.614 | 28.386 | 28.557 | 35.300 | 29.167 | 32.800 | 30.467 |
| **3** | 156,157,158 | 39.540 | 39.543 | 49.700 | 46.171 | 45.714 | 43.857 | 46.486 | 41.614 | 47.886 | 46.200 | 43.617 | 38.957 | 40.433 |
| **4** | 159,160 | 23.940 | 34.286 | 24.686 | 24.814 | 29.657 | 33.271 | 27.157 | 26.429 | 26.900 | 27.733 | 26.917 | 26.914 | 28.183 |
| **5** | 251,252,253 | 43.800 | 43.843 | 50.686 | 44.014 | 44.057 | 44.400 | 40.186 | 42.314 | 44.043 | 50.267 | 43.150 | 44.114 | 45.917 |
| **6** | 254,255 | 29.460 | 31.343 | 33.571 | 33.971 | 32.286 | 31.786 | 32.757 | 36.343 | 37.471 | 32.217 | 26.200 | 30.043 | 35.650 |
| **7** | 256,257,258, | 44.980 | 44.114 | 47.843 | 47.829 | 42.529 | 42.171 | 42.686 | 43.614 | 43.400 | 43.183 | 47.567 | 46.500 | 43.517 |
| **8** | 259,260 | 26.080 | 27.129 | 31.771 | 27.829 | 27.714 | 29.071 | 27.429 | 27.171 | 27.914 | 25.933 | 27.533 | 27.414 | 29.250 |
| **9** | 351,352,353 | 45.900 | 45.257 | 48.557 | 48.543 | 48.414 | 46.443 | 47.043 | 48.643 | 51.386 | 42.667 | 48.650 | 42.671 | 39.283 |
| **10** | 354,355 | 28.480 | 28.100 | 32.143 | 32.686 | 33.200 | 34.129 | 31.886 | 31.386 | 32.657 | 31.667 | 29.933 | 31.143 | 32.900 |
| **11** | 356,357,358 | 45.180 | 41.514 | 44.371 | 45.514 | 41.614 | 46.729 | 42.671 | 42.471 | 42.443 | 39.617 | 40.850 | 42.214 | 37.733 |
| **12** | 359,360 | 27.500 | 31.771 | 32.757 | 29.929 | 30.614 | 32.129 | 29.300 | 30.857 | 33.771 | 34.933 | 30.267 | 28.771 | 31.700 |
| **13** | 451,452,453 | 39.720 | 42.886 | 49.400 | 46.157 | 49.014 | 45.400 | 42.414 | 38.714 | 48.971 | 44.083 | 38.283 | 37.886 | 44.617 |
| **14** | 454,455 | 28.660 | 35.900 | 36.686 | 35.243 | 36.957 | 34.971 | 37.000 | 31.571 | 35.371 | 33.083 | 27.650 | 29.814 | 32.900 |
| **15** | 456,457,458 | 40.260 | 41.357 | 46.471 | 49.029 | 43.771 | 46.743 | 49.514 | 43.714 | 43.757 | 45.083 | 42.267 | 44.586 | 39.033 |
| **16** | 459,460 | 33.020 | 28.786 | 30.586 | 34.857 | 29.114 | 30.086 | 27.986 | 25.186 | 30.614 | 34.733 | 23.917 | 24.600 | 26.133 |
| **17** | 551,552,553 | 40.540 | 45.414 | 49.329 | 46.657 | 48.357 | 48.443 | 46.100 | 46.857 | 47.029 | 40.833 | 44.950 | 40.143 | 36.333 |
| **18** | 554,555 | 33.900 | 28.957 | 35.186 | 32.414 | 32.171 | 30.586 | 31.700 | 29.757 | 32.000 | 29.117 | 28.767 | 29.257 | 31.483 |

**Appendix 3**

**Hematological Values of Individual Rat (45 DAY)**

**Group I (Vehicle Control) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **101** | 16.8 | 28.1 | 12 | 54.9 | 46 | 13.9 | 30.6 | 352 | 64 | 4 | 30 | 2 | 0 |
| **102** | 15.9 | 9.79 | 11.2 | 51.6 | 46 | 14.2 | 30.7 | 603 | 72 | 2 | 25 | 1 | 0 |
| **103** | 16.4 | 12.3 | 10.7 | 50.9 | 48 | 15.3 | 32.1 | 385 | 69 | 2 | 28 | 1 | 0 |
| **104** | 16.5 | 15.2 | 11.7 | 52.9 | 45 | 14.1 | 31.2 | 653 | 73 | 2 | 25 | 0 | 0 |
| **105** | 15.6 | 9.77 | 11.1 | 50.9 | 46 | 14 | 30.5 | 540 | 72 | 1 | 26 | 1 | 0 |
| **106** | 16.7 | 12 | 11.4 | 53.9 | 47 | 14.6 | 31 | 397 | 70 | 3 | 25 | 2 | 0 |
| **107** | 15.9 | 21 | 11.3 | 52.8 | 47 | 14 | 30.1 | 401 | 76 | 4 | 18 | 2 | 0 |
| **108** | 17.1 | 12.5 | 11.6 | 54.9 | 47 | 14.6 | 31.1 | 442 | 64 | 6 | 27 | 3 | 0 |
| **109** | 16.6 | 13.5 | 11.4 | 53.4 | 47 | 14.6 | 31.1 | 628 | 75 | 2 | 22 | 1 | 0 |
| **110** | 16.3 | 11.9 | 10.9 | 52.5 | 48 | 14.8 | 31 | 597 | 82 | 1 | 16 | 1 | 0 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **151** | 15.5 | 12.1 | 10.3 | 49.1 | 47 | 14.9 | 31.2 | 784 | 63 | 4 | 31 | 2 | 0 |
| **152** | 15.9 | 12.5 | 10.5 | 49.6 | 47 | 15.1 | 32 | 272 | 59 | 5 | 33 | 3 | 0 |
| **153** | 15.4 | 17.1 | 10.1 | 48.3 | 47 | 15.1 | 31.9 | 655 | 74 | 3 | 28 | 1 | 0 |
| **154** | 15.5 | 9.4 | 10.4 | 49.1 | 47 | 14.9 | 31.6 | 322 | 60 | 4 | 35 | 1 | 0 |
| **155** | 16.4 | 10.4 | 10.7 | 51 | 47 | 15.2 | 32 | 775 | 72 | 5 | 20 | 3 | 0 |
| **156** | 14.9 | 10.9 | 9.48 | 45.5 | 48 | 15.7 | 32.8 | 492 | 73 | 2 | 23 | 2 | 0 |
| **157** | 14.4 | 6.66 | 9.23 | 45.1 | 49 | 15.6 | 32 | 778 | 63 | 3 | 31 | 3 | 0 |
| **158** | 14.8 | 16.5 | 10 | 46.8 | 47 | 14.8 | 31.8 | 325 | 61 | 4 | 32 | 3 | 0 |
| **159** | 14.9 | 7.8 | 9.72 | 46.3 | 48 | 15.3 | 32.1 | 603 | 62 | 3 | 32 | 3 | 0 |
| **160** | 14.1 | 8.36 | 9.22 | 45.4 | 49 | 15.3 | 31.1 | 390 | 61 | 1 | 36 | 2 | 0 |

**Appendix 3 (Contd….)**

**Hematological Values of Individual Rat (45 DAY)**

**Group II (3 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **201** | 15.9 | 9.75 | 11.1 | 51.3 | 46 | 14.2 | 31 | 549 | 67 | 2 | 31 | 0 | 0 |
| **202** | 15.6 | 11 | 10.6 | 50.2 | 47 | 14.7 | 31.1 | 616 | 64 | 2 | 33 | 1 | 0 |
| **203** | 15.7 | 10.5 | 11 | 50.2 | 46 | 14.3 | 31.3 | 622 | 73 | 4 | 20 | 3 | 0 |
| **204** | 16.5 | 12.7 | 11.6 | 53.6 | 46 | 14.2 | 30.8 | 567 | 77 | 3 | 19 | 1 | 0 |
| **205** | 16.9 | 19.9 | 11.9 | 56.5 | 47 | 14.1 | 29.8 | 682 | 76 | 5 | 18 | 1 | 0 |
| **206** | 15.9 | 10.9 | 10.6 | 50.9 | 48 | 14.9 | 31.3 | 643 | 72 | 4 | 22 | 2 | 0 |
| **207** | 16.5 | 11.5 | 10.9 | 52.6 | 48 | 15.1 | 31.3 | 529 | 66 | 5 | 26 | 3 | 0 |
| **208** | 15.2 | 10.1 | 10.8 | 49.9 | 46 | 13.9 | 30.4 | 615 | 59 | 3 | 36 | 2 | 0 |
| **209** | 15.7 | 11 | 3.8 | 50.5 | 47 | 14.5 | 31.1 | 563 | 72 | 2 | 24 | 2 | 0 |
| **210** | 15.4 | 11.5 | 10.5 | 49.7 | 47 | 14.5 | 30.9 | 518 | 65 | 5 | 28 | 2 | 0 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **251** | 15.3 | 11.9 | 10.1 | 47.3 | 47 | 15 | 32.2 | 501 | 71 | 3 | 24 | 2 | 0 |
| **252** | 15.2 | 7.93 | 9.93 | 48.1 | 48 | 15.3 | 31.5 | 867 | 63 | 4 | 26 | 3 | 0 |
| **253** | 15.9 | 14.1 | 10.4 | 49.6 | 48 | 1.3 | 32.1 | 409 | 67 | 6 | 25 | 2 | 0 |
| **254** | 15.9 | 7.24 | 10.2 | 49.7 | 49 | 15.6 | 31.9 | 744 | 68 | 4 | 26 | 2 | 0 |
| **255** | 15.1 | 6.22 | 10.1 | 48.2 | 47 | 14.8 | 31.3 | 699 | 61 | 3 | 35 | 1 | 0 |
| **256** | 14.9 | 9.36 | 9.83 | 47.2 | 48 | 15.2 | 31.6 | 687 | 58 | 5 | 35 | 2 | 0 |
| **257** | 15.6 | 11.1 | 10.2 | 49.1 | 48 | 15.2 | 31.7 | 461 | 70 | 3 | 27 | 0 | 0 |
| **258** | 15.2 | 11.8 | 10.3 | 48.6 | 47 | 14.7 | 31.2 | 697 | 72 | 7 | 20 | 1 | 0 |
| **259** | 15 | 8.75 | 9.46 | 46.9 | 50 | 15.8 | 31.9 | 434 | 71 | 2 | 25 | 2 | 0 |
| **260** | 15 | 16 | 9.35 | 46.4 | 50 | 16 | 32.2 | 673 | 69 | 3 | 27 | 1 | 0 |

**Appendix 3 (Contd….)**

**Hematological Values of Individual Rat (45 DAY)**

**Group III (15 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **301** | 15.4 | 12.5 | 11 | 49.4 | 45 | 13.9 | 31 | 599 | 74 | 2 | 23 | 1 | 0 |
| **302** | 17.1 | 16.8 | 12.4 | 56.2 | 45 | 13.7 | 30.4 | 598 | 63 | 6 | 29 | 2 | 0 |
| **303** | 15.8 | 11.4 | 10.9 | 52.2 | 48 | 14.4 | 30.3 | 570 | 78 | 2 | 19 | 1 | 0 |
| **304** | 16.1 | 14.5 | 11.2 | 52.6 | 47 | 14.2 | 30.5 | 637 | 69 | 3 | 26 | 2 | 0 |
| **305** | 15.3 | 11.9 | 10.4 | 49.5 | 48 | 14.7 | 30.9 | 610 | 64 | 7 | 27 | 2 | 0 |
| **306** | 15.7 | 11.3 | 11.2 | 53.1 | 47 | 14 | 29.6 | 505 | 81 | 1 | 16 | 2 | 0 |
| **307** | 16.8 | 13.2 | 11.4 | 53.7 | 47 | 14.7 | 31.3 | 515 | 74 | 3 | 22 | 1 | 0 |
| **308** | 16.7 | 16.1 | 11.4 | 53.6 | 47 | 14.6 | 31.1 | 499 | 67 | 4 | 27 | 2 | 0 |
| **309** | 16.3 | 11.6 | 11.3 | 53.5 | 47 | 14.4 | 31.4 | 616 | 71 | 1 | 27 | 1 | 0 |
| **310** | 16.2 | 13.5 | 11.1 | 52.7 | 47 | 14.5 | 30.6 | 526 | 68 | 4 | 26 | 2 | 0 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **351** | 15.4 | 12.5 | 9.94 | 47.6 | 48 | 15.5 | 32.3 | 573 | 68 | 2 | 29 | 1 | 0 |
| **352** | 14.9 | 9.34 | 10.4 | 47.6 | 47 | 14.7 | 31.2 | 608 | 62 | 3 | 33 | 2 | 0 |
| **353** | 16.1 | 13.6 | 10.5 | 51.4 | 49 | 15.3 | 31.4 | 630 | 66 | 2 | 30 | 2 | 0 |
| **354** | 15.8 | 10.7 | 10.7 | 51 | 48 | 14.7 | 30.9 | 570 | 64 | 4 | 31 | 1 | 0 |
| **355** | 15.7 | 10.1 | 10.4 | 50.2 | 48 | 15 | 31.2 | 639 | 67 | 3 | 28 | 2 | 0 |
| **356** | 15.5 | 7.9 | 9.96 | 48.4 | 49 | 15.6 | 32 | 684 | 63 | 6 | 29 | 2 | 0 |
| **357** | 15.5 | 5.46 | 9.62 | 47.6 | 49 | 16.2 | 32.7 | 678 | 64 | 3 | 32 | 1 | 0 |
| **358** | 15 | 11.8 | 9.72 | 47.6 | 49 | 15.4 | 31.5 | 494 | 77 | 2 | 19 | 2 | 0 |
| **359** | 15.6 | 10.7 | 10 | 48.9 | 49 | 15.6 | 31.8 | 546 | 66 | 5 | 28 | 1 | 0 |
| **360** | 14.8 | 12.4 | 9.13 | 47 | 52 | 16.2 | 31.4 | 558 | 73 | 3 | 22 | 2 | 0 |

**Appendix 3 (Contd….)**

**Hematological Values of Individual Rat (45 DAY)**

**Group IV (30 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **401** | 15.7 | 12.1 | 11.1 | 51.1 | 46 | 14.1 | 13.8 | 613 | 75 | 3 | 21 | 1 | 0 |
| **402** | 14.8 | 9.35 | 10.4 | 47.7 | 46 | 14.2 | 31 | 494 | 74 | 4 | 20 | 2 | 0 |
| **403** | 15.1 | 11.2 | 10.7 | 49.9 | 46 | 14 | 30.3 | 526 | 67 | 3 | 27 | 3 | 0 |
| **404** | 16.4 | 11.5 | 11.5 | 54 | 47 | 14.1 | 31.2 | 536 | 71 | 2 | 25 | 2 | 0 |
| **405** | 16.6 | 14.9 | 11.6 | 54 | 46 | 14.2 | 30.8 | 333 | 67 | 4 | 27 | 2 | 0 |
| **406** | 15.5 | 11.6 | 10.9 | 49.6 | 45 | 14.1 | 31.3 | 558 | 68 | 1 | 29 | 2 | 0 |
| **407** | 17.1 | 15.4 | 12.3 | 57.8 | 47 | 13.9 | 29.6 | 793 | 79 | 2 | 18 | 1 | 0 |
| **408** | 16.3 | 13.3 | 11.5 | 54.2 | 47 | 14.1 | 30.1 | 584 | 66 | 3 | 29 | 2 | 0 |
| **409** | 16 | 8.48 | 11.2 | 52.9 | 47 | 14.2 | 30.2 | 225 | 66 | 3 | 28 | 3 | 0 |
| **410** | 15.5 | 10.9 | 10.5 | 49.9 | 47 | 14.7 | 31.1 | 504 | 68 | 4 | 26 | 2 | 0 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **451** | 15.2 | 12.3 | 9.93 | 48.1 | 48 | 15.3 | 31.7 | 384 | 63 | 4 | 31 | 2 | 0 |
| **452** | 15.5 | 12.2 | 10.3 | 49.4 | 48 | 15 | 81.4 | 610 | 71 | 7 | 20 | 2 | 0 |
| **453** | 15.9 | 9.65 | 10.5 | 15.2 | 48 | 15 | 31.6 | 620 | 69 | 4 | 24 | 3 | 0 |
| **454** | 15.8 | 11.7 | 10.5 | 51 | 48 | 15 | 31 | 844 | 67 | 5 | 26 | 2 | 0 |
| **455** | 14.9 | 9.31 | 9.69 | 47.8 | 49 | 15.4 | 31.2 | 504 | 60 | 3 | 34 | 3 | 0 |
| **456** | 15.3 | 16.3 | 9.83 | 47.2 | 48 | 15.5 | 32.3 | 362 | 61 | 6 | 31 | 2 | 0 |
| **457** | 13.6 | 14.5 | 8.73 | 42 | 48 | 15.6 | 32.6 | 444 | 67 | 4 | 26 | 3 | 0 |
| **458** | 15.1 | 16 | 9.75 | 47.9 | 49 | 15.5 | 31.4 | 322 | 57 | 1 | 41 | 1 | 0 |
| **459** | 15.2 | 10.1 | 9.8 | 48.2 | 49 | 15.5 | 31.6 | 644 | 70 | 3 | 26 | 1 | 0 |
| **460** | 13.6 | 8.88 | 8.55 | 42.6 | 50 | 16 | 32 | 674 | 72 | 4 | 22 | 2 | 0 |

**Appendix 3 (Contd….)**

**Hematological Values of Individual Rat (45 DAY)**

**Group V (30 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **501** | 16.5 | 15.5 | 11.4 | 53.6 | 47 | 14.4 | 30.7 | 715 | 55 | 2 | 41 | 2 | 0 |
| **502** | 16.1 | 15.4 | 11.3 | 51.1 | 45 | 14.3 | 31.6 | 542 | 70 | 4 | 23 | 3 | 0 |
| **503** | 15.6 | 13.1 | 10.7 | 50.6 | 47 | 14.5 | 30.9 | 633 | 71 | 5 | 22 | 2 | 0 |
| **504** | 15.7 | 14.8 | 11.2 | 53 | 47 | 14 | 29.7 | 640 | 67 | 2 | 30 | 1 | 0 |
| **505** | 15.8 | 12.5 | 10.7 | 50.8 | 47 | 14.7 | 31.1 | 458 | 69 | 1 | 25 | 2 | 0 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **551** | 15.2 | 12.1 | 10.3 | 48.8 | 47 | 14.7 | 31.1 | 615 | 68 | 6 | 24 | 2 | 0 |
| **552** | 14.5 | 10.3 | 9.82 | 47 | 48 | 14.7 | 30.7 | 664 | 67 | 4 | 28 | 1 | 0 |
| **553** | 15.5 | 10.7 | 10.1 | 49.1 | 49 | 15.3 | 31.5 | 439 | 63 | 5 | 29 | 3 | 0 |
| **554** | 16 | 10.7 | 10.4 | 50.8 | 49 | 15.4 | 31.6 | 601 | 69 | 4 | 25 | 2 | 0 |
| **555** | 14.4 | 15.4 | 9.45 | 45.6 | 48 | 15.3 | 31.6 | 546 | 68 | 3 | 26 | 3 | 0 |

**Appendix 3 (Contd….)**

**Hematological Values of Individual Rat (90 DAY)**

**Group I (Vehicle Control) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **101** | 17 | 11.1 | 12.5 | 58.6 | 47 | 13.6 | 29 | 486 | 68 | 4 | 27 | 1 | 0 |
| **102** | 16.6 | 17.1 | 12.1 | 56.2 | 46 | 13.7 | 29.5 | 790 | 66 | 5 | 27 | 2 | 0 |
| **103** | 17.7 | 10.2 | 12.8 | 60.4 | 47 | 13.7 | 29.3 | 779 | 73 | 2 | 25 | 0 | 0 |
| **104** | 16.8 | 10.2 | 11.7 | 56.4 | 48 | 14.3 | 29.8 | 663 | 72 | 4 | 22 | 2 | 0 |
| **105** | 18 | 12.9 | 13.1 | 61.6 | 47 | 13.7 | 29.2 | 622 | 80 | 2 | 16 | 2 | 0 |
| **106** | 17.6 | 11.4 | 12.4 | 58.4 | 47 | 14.2 | 30.1 | 685 | 74 | 4 | 20 | 2 | 0 |
| **107** | 17.1 | 12.6 | 11.9 | 57.7 | 48 | 14.2 | 29.6 | 790 | 76 | 2 | 21 | 1 | 0 |
| **108** | 16.5 | 10.9 | 11.8 | 55.5 | 47 | 14 | 29.7 | 788 | 72 | 2 | 25 | 1 | 0 |
| **109** | 16.7 | 9.11 | 11.1 | 54.4 | 49 | 15 | 30.7 | 798 | 76 | 3 | 19 | 2 | 0 |
| **110** | 16.2 | 13.6 | 11.2 | 54.8 | 49 | 14.3 | 29.5 | 616 | 77 | 4 | 18 | 1 | 0 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **151** | 16.5 | 9.6 | 11 | 57.5 | 52 | 14.9 | 28.7 | 897 | 57 | 2 | 41 | 0 | 0 |
| **152** | 17 | 6.49 | 11.5 | 56.2 | 49 | 14.8 | 30.2 | 829 | 65 | 1 | 32 | 2 | 0 |
| **153** | 21.7 | 5.71 | 15.9 | 78.8 | 49 | 13.6 | 27.5 | 180 | 30 | 3 | 64 | 3 | 0 |
| **154** | 19.7 | 5.94 | 12.3 | 67.5 | 55 | 15.9 | 29.2 | 475 | 58 | 1 | 39 | 2 | 0 |
| **155** | 20.2 | 6.06 | 14.7 | 70.7 | 48 | 13.7 | 28.5 | 651 | 62 | 2 | 35 | 1 | 0 |
| **156** | 15.2 | 3.9 | 9.87 | 49 | 50 | 15.4 | 30.9 | 911 | 66 | 3 | 30 | 1 | 0 |
| **157** | 16.7 | 6.53 | 11.3 | 54.4 | 48 | 14.6 | 30.6 | 747 | 63 | 5 | 30 | 2 | 0 |
| **158** | 16 | 6.56 | 10 | 50.3 | 50 | 15.9 | 31.9 | 701 | 67 | 4 | 27 | 2 | 0 |
| **159** | 15.8 | 6.21 | 10.5 | 51.8 | 49 | 15.1 | 30.5 | 730 | 69 | 2 | 29 | 0 | 0 |
| **160** | 15.2 | 3.99 | 9.63 | 47.7 | 50 | 15.7 | 31.7 | 750 | 54 | 5 | 39 | 2 | 0 |

**Appendix 3 (Contd….)**

**Hematological Values of Individual Rat (90 DAY)**

**Group II (3 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **201** | 15.1 | 11.7 | 10.8 | 51 | 47 | 14 | 29.5 | 655 | 74 | 3 | 22 | 1 | 0 |
| **202** | 15.7 | 13.6 | 10.7 | 51.9 | 48 | 14.6 | 30.2 | 606 | 77 | 2 | 19 | 2 | 0 |
| **203** | 16.5 | 13.5 | 11.7 | 55.2 | 47 | 14.1 | 29.9 | 959 | 63 | 4 | 31 | 2 | 0 |
| **204** | 17.6 | 8.85 | 12.6 | 58.8 | 47 | 13.9 | 29.9 | 598 | 67 | 2 | 30 | 1 | 0 |
| **205** | 16.6 | 10 | 11.7 | 56.6 | 48 | 14.1 | 29.2 | 623 | 63 | 1 | 35 | 1 | 0 |
| **206** | 16 | 7.41 | 11.2 | 54.3 | 48 | 14.3 | 29.5 | 744 | 58 | 3 | 37 | 2 | 0 |
| **207** | 16.6 | 10.5 | 11.6 | 57.2 | 49 | 14.3 | 29 | 635 | 78 | 2 | 19 | 1 | 0 |
| **208** | 16.5 | 10 | 11.4 | 53.9 | 47 | 14.4 | 30.6 | 721 | 75 | 3 | 20 | 2 | 0 |
| **209** | 17.2 | 15.2 | 12 | 57.8 | 48 | 14.3 | 29.7 | 731 | 60 | 4 | 33 | 3 | 0 |
| **210** | 16.1 | 10.9 | 11.3 | 54.8 | 48 | 14.2 | 29.4 | 564 | 67 | 5 | 26 | 2 | 0 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **251** | 15.6 | 7.13 | 10.3 | 51.3 | 50 | 15.1 | 30.4 | 746 | 65 | 2 | 33 | 0 | 0 |
| **252** | 16.2 | 11.4 | 10.6 | 53 | 50 | 15.3 | 30.5 | 877 | 69 | 3 | 24 | 4 | 0 |
| **253** | 15.4 | 6.44 | 10.4 | 52.1 | 50 | 14.8 | 29.6 | 808 | 71 | 5 | 22 | 2 | 0 |
| **254** | 15.8 | 8 | 10.7 | 52.1 | 49 | 14.7 | 30.4 | 789 | 60 | 3 | 34 | 3 | 0 |
| **255** | 16.2 | 5.48 | 10.6 | 52.7 | 50 | 15.2 | 30.7 | 863 | 68 | 4 | 26 | 2 | 0 |
| **256** | 16 | 5.11 | 10.4 | 51.7 | 50 | 15.3 | 30.8 | 798 | 81 | 1 | 18 | 0 | 0 |
| **257** | 17.1 | 7.52 | NA | NA | NA | NA | NA | NA | 70 | 3 | 25 | 2 | 0 |
| **258** | 14.8 | 5.1 | 9.97 | 47.8 | 48 | 14.9 | 31 | 726 | 72 | 1 | 26 | 1 | 0 |
| **259** | 15.8 | 5.47 | 10 | 50.3 | 50 | 15.7 | 31.3 | 803 | 66 | 6 | 25 | 3 | 0 |
| **260** | 14.9 | 4.36 | 9.47 | 47.3 | 50 | 15.7 | 31.5 | 824 | 80 | 2 | 18 | 0 | 0 |

NA : Not analyzed

**Appendix 3 (Contd….)**

**Hematological Values of Individual Rat (90 DAY)**

**Group III (15 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **301** | 14.7 | 9.44 | 10.3 | 48.7 | 47 | 14.2 | 30.1 | 717 | 56 | 4 | 37 | 3 | 0 |
| **302** | 16.6 | 13.5 | 12 | 57.3 | 47 | 13.8 | 29 | 828 | 68 | 3 | 27 | 2 | 0 |
| **303** | 15.8 | 10.2 | 10.6 | 52.1 | 49 | 14.9 | 30.4 | 648 | 66 | 5 | 28 | 1 | 0 |
| **304** | 16.7 | 13.3 | 11.9 | 55.6 | 47 | 14 | 30 | 848 | 69 | 1 | 28 | 2 | 0 |
| **305** | 16.5 | 11.5 | 11.8 | 55.3 | 47 | 14 | 29.8 | 742 | 68 | 4 | 26 | 2 | 0 |
| **306** | 15.8 | 10.3 | 11.5 | 53.6 | 46 | 13.7 | 29.5 | 704 | 70 | 2 | 26 | 2 | 0 |
| **307** | 16.5 | 15.1 | 12 | 57.6 | 48 | 13.7 | 28.6 | 638 | 60 | 4 | 35 | 1 | 0 |
| **308** | 18.1 | 7.66 | 13 | 63.4 | 48 | 13.8 | 28.5 | 753 | 74 | 2 | 23 | 1 | 0 |
| **309** | 15.2 | 9.33 | 11.1 | 53 | 48 | 13.7 | 28.7 | 662 | 72 | 4 | 22 | 2 | 0 |
| **310** | 16 | 11.4 | 11.2 | 53.1 | 47 | 14.3 | 30.2 | 672 | 61 | 5 | 31 | 3 | 0 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **351** | 16.2 | 4.72 | 10.9 | 55.8 | 51 | 14.8 | 14.8 | 626 | 64 | 6 | 28 | 2 | 0 |
| **352** | 15.8 | 10.5 | 10.5 | 52.1 | 50 | 15 | 30.3 | 1102 | 60 | 7 | 32 | 1 | 0 |
| **353** | 16.3 | 9.25 | 10.6 | 53.4 | 50 | 15.3 | 30.5 | 847 | 77 | 2 | 19 | 2 | 0 |
| **354** | 16.5 | 10.1 | 10.5 | 52.4 | 50 | 15.7 | 15.7 | 813 | 53 | 4 | 42 | 1 | 0 |
| **355** | 15.7 | 6.73 | 10.4 | 51.8 | 50 | 15 | 30.3 | 771 | 38 | 3 | 57 | 2 | 0 |
| **356** | 15.8 | 6.56 | 10.2 | 51.2 | 50 | 15.4 | 30.8 | 826 | 64 | 4 | 30 | 2 | 0 |
| **357** | 16.7 | 7.69 | 11.1 | 55 | 50 | 15 | 30.3 | 761 | 63 | 5 | 30 | 2 | 0 |
| **358** | 16 | 6.4 | 10.7 | 53.4 | 50 | 14.8 | 29.8 | 809 | 66 | 2 | 31 | 1 | 0 |
| **359** | 17.3 | 7.14 | 11.5 | 57.3 | 49 | 14.9 | 30.1 | 609 | 75 | 3 | 20 | 2 | 0 |
| **360** | 15.8 | 4.84 | 10.2 | 52.7 | 51 | 15.4 | 30 | 676 | 59 | 3 | 34 | 4 | 0 |

**Appendix 3 (Contd….)**

**Hematological Values of Individual Rat (90 DAY)**

**Group IV (30 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **401** | 16.1 | 12.6 | 11.2 | 54 | 48 | 14.4 | 29.8 | 666 | 66 | 3 | 29 | 2 | 0 |
| **402** | 17.3 | 11.6 | 12.5 | 60.5 | 48 | 13.8 | 28.5 | 497 | 71 | 5 | 24 | 1 | 0 |
| **403** | 17 | 11.5 | 12.4 | 60.4 | 48 | 13.6 | 28.1 | 484 | 72 | 2 | 25 | 1 | 0 |
| **404** | 15.6 | 9.99 | 11.3 | 53 | 47 | 13.7 | 29.3 | 737 | 70 | 3 | 25 | 2 | 0 |
| **405** | 16.4 | 9.83 | 11.3 | 54.5 | 48 | 14.5 | 30.1 | 732 | 60 | 5 | 33 | 2 | 0 |
| **406** | 16.9 | 11.4 | 12.8 | 59.3 | 46 | 13.1 | 28.4 | 703 | 69 | 6 | 22 | 3 | 0 |
| **407** | 16.4 | 12.7 | 11.8 | 56.5 | 48 | 13.8 | 29 | 867 | 64 | 3 | 32 | 1 | 0 |
| **408** | 15.8 | 8.17 | 11.3 | 54.6 | 48 | 14 | 29 | 706 | 68 | 2 | 29 | 1 | 0 |
| **409** | 15.6 | 11.7 | 11.3 | 53.3 | 47 | 13.8 | 29.3 | 516 | 45 | 3 | 50 | 2 | 0 |
| **410** | 16.8 | 11.3 | 11.9 | 57.8 | 48 | 14 | 29 | 491 | 54 | 6 | 38 | 2 | 0 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **451** | 17.1 | 9.83 | 10.9 | 53.9 | 49 | 15.6 | 31.7 | 937 | 32 | 4 | 62 | 2 | 0 |
| **452** | 15.8 | 8.69 | 9.88 | 49.3 | 50 | 16 | 31.9 | 789 | 69 | 5 | 25 | 1 | 0 |
| **453** | 16.8 | 11.1 | 11.1 | 55.2 | 50 | 15.1 | 30.4 | 373 | 76 | 1 | 23 | 0 | 0 |
| **454** | 16.5 | 8.2 | 10.5 | 53.8 | 51 | 15.7 | 30.6 | 858 | 20 | 3 | 75 | 2 | 0 |
| **455** | 16.6 | 5.86 | 11.1 | 55.1 | 50 | 14.9 | 30.1 | 813 | 75 | 4 | 19 | 2 | 0 |
| **456** | 16.3 | 8.54 | 10.7 | 52.9 | 49 | 15.2 | 30.8 | 729 | 57 | 3 | 37 | 3 | 0 |
| **457** | 15.8 | 9.01 | 10.4 | 51.1 | 49 | 15.2 | 31 | 803 | 66 | 3 | 30 | 1 | 0 |
| **458** | 16.1 | 6.55 | 10.7 | 54 | 50 | 15 | 29.9 | 761 | 52 | 2 | 46 | 0 | 0 |
| **459** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **460** | 14.3 | 5.71 | 9.03 | 47 | 52 | 15.8 | 30.4 | 768 | 76 | 2 | 21 | 1 | 0 |

NA : Not analyzed

**Appendix 3 (Contd….)**

**Hematological Values of Individual Rat (90 DAY)**

**Group V (30 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **501** | 15.6 | 8.02 | 11 | 53.9 | 49 | 14.1 | 29 | 857 | 64 | 4 | 31 | 1 | 0 |
| **502** | 16.3 | 11.9 | 11.3 | 54.4 | 48 | 14.4 | 30 | 659 | 69 | 2 | 28 | 1 | 0 |
| **503** | 16.6 | 10.6 | 12.2 | 57.2 | 47 | 13.6 | 28.9 | 955 | 60 | 2 | 36 | 2 | 0 |
| **504** | 16.2 | 12.3 | 11.8 | 56.4 | 48 | 13.7 | 28.7 | 309 | 67 | 4 | 28 | 1 | 0 |
| **505** | 16.4 | 12.3 | 11.6 | 56.6 | 49 | 14.1 | 29 | 534 | 74 | 5 | 19 | 2 | 0 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Haemoglobin** | **WBC** | **RBC** | **PCV** | **MCV** | **MCH** | **MCHC** | **Platelet** | **L** | **M** | **N** | **E** | **B** |
| **551** | 17.3 | 13.5 | 11.9 | 58.8 | 49 | 14.4 | 29.3 | 949 | 71 | 4 | 23 | 2 | 0 |
| **552** | 18.3 | 11 | 12.2 | 59.8 | 49 | 15 | 30.6 | 674 | 63 | 2 | 34 | 1 | 0 |
| **553** | 16 | 7.24 | 10.6 | 51.9 | 49 | 15.1 | 30.8 | 919 | 74 | 2 | 24 | 0 | 0 |
| **554** | 16.1 | 4.48 | 10.8 | 53.6 | 49 | 14.8 | 30 | 825 | 60 | 3 | 34 | 3 | 0 |
| **555** | 15.6 | 6.25 | 10.4 | 52 | 50 | 14.9 | 30 | 403 | 64 | 4 | 30 | 2 | 0 |

**Appendix 4**

**Biochemical Values of Individual Rats (45 Day)**

**Group I (Vehicle Control) Sex : Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **101** | 83.9 | 143.7 | 260 | 7.36 | 0.11 | 0.13 | 31.8 | 0.78 | 70 | 87 | 97 | 2.27 | 10 | 5.28 | 8.51 |
| **102** | 123.9 | 167.6 | 296 | 6.01 | 0.1 | 0.11 | 34 | 0.78 | 56.9 | 80 | 102 | 2.85 | 9.1 | 4.86 | 8.15 |
| **103** | 71.8 | 155.1 | 262 | 6.77 | 0.08 | 0.08 | 32.1 | 0.77 | 81.2 | 90 | 86 | 2.28 | 10 | 4.21 | 8.06 |
| **104** | 77.8 | 143.7 | 303 | 6.89 | 0.12 | 0.12 | 32.7 | 0.75 | 51.6 | 71 | 92 | 3.06 | 9.2 | 5.05 | 8.22 |
| **105** | 94.4 | 145.1 | 263 | 7.12 | 0.09 | 0.12 | 33.2 | 0.83 | 69.1 | 66 | 102 | 2.02 | 9.2 | 3.52 | 8.44 |
| **106** | 75.6 | 139.8 | 262 | 6.37 | 0.08 | 0.08 | 29.5 | 0.77 | 72 | 84 | 83 | 2.72 | 9.3 | 4.91 | 8.37 |
| **107** | 79.3 | 122.1 | 298 | 7.42 | 0.08 | 0.11 | 32.4 | 0.8 | 76.3 | 103 | 93 | 2.14 | 10.1 | 4.24 | 8.38 |
| **108** | 77.8 | 120.2 | 281 | 7.34 | 0.08 | 0.1 | 30.3 | 0.8 | 75.1 | 102 | 94 | 2.12 | 9.4 | 4.36 | 8.02 |
| **109** | 67.2 | 127.4 | 406 | 7.76 | 0.08 | 0.09 | 38.3 | 0.75 | 52.9 | 95 | 78 | 2.75 | 9.6 | 4.6 | 8.42 |
| **110** | 83.1 | 144.6 | 259 | 6.87 | 0.11 | 0.12 | 33.1 | 0.79 | 76.9 | 81 | 95 | 2.31 | 9.2 | 4.39 | 8.42 |

**Sex : Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **151** | 69.5 | 127.4 | 265 | 5.57 | 0.16 | 0.1 | 42.4 | 0.83 | 60.3 | 104 | 58 | 2.58 | 9.6 | 5.18 | 8.47 |
| **152** | 91.4 | 140.8 | 323 | 6.68 | 0.17 | 0.11 | 39.4 | 0.95 | 63.6 | 103 | 76 | 2.25 | 10.7 | 5.55 | 10.64 |
| **153** | 78.6 | 181.4 | 416 | 8.17 | 0.14 | 0.09 | 41.2 | 0.87 | 55.8 | 78 | 71 | 2.35 | 9.8 | 4.97 | 8.44 |
| **154** | 77.8 | 139.8 | 179 | 5.26 | 0.17 | 0.11 | 39.6 | 0.81 | 71.9 | 548 | 58 | 2.57 | 9.4 | 4.59 | 8.8 |
| **155** | 89.9 | 141.3 | 316 | 7.36 | 0.18 | 0.14 | 40 | 0.9 | 76.5 | 70 | 63 | 2.15 | 9.6 | 5.26 | 9.33 |
| **156** | 77.1 | 117.4 | 231 | 6.63 | 0.18 | 0.1 | 39.3 | 0.85 | 86.5 | 51 | 53 | 1.62 | 10 | 4.77 | 8.71 |
| **157** | 83.9 | 91.5 | 382 | 5.49 | 0.18 | 0.09 | 40.9 | 0.86 | 113 | 63 | 69 | 1.68 | 9.6 | 4.46 | 8.71 |
| **158** | 89.9 | 148 | 391 | 7.09 | 0.06 | 0.12 | 44.8 | 0.88 | 80.5 | 74 | 58 | 2.12 | 10.6 | 5.74 | 10.37 |
| **159** | 80.1 | 102.1 | 230 | 5.76 | 0.08 | 0.1 | 36.1 | 0.86 | 102 | 34 | 55 | 1.53 | 9.6 | 4.61 | 9.19 |
| **160** | 69.5 | 127.4 | 175 | 5.6 | 0.06 | 0.08 | 36.2 | 0.82 | 133 | 41 | 40 | 1.87 | 9.2 | 4.14 | 8.31 |

Key:ID= identification

**Appendix 4 (Contd….)**

**Biochemical Values of Individual Rats (45 Day)**

**Group II (3 mg/kg Bw) Sex : Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **201** | 78.6 | 144.6 | 284 | 6.34 | 0.08 | 0.11 | 35.7 | 0.78 | 60.2 | 120 | 83 | 3.16 | 10 | 4.2 | 7.56 |
| **202** | 102 | 133.6 | 295 | 6.65 | 0.1 | 0.1 | 38.5 | 0.83 | 108.3 | 85 | 86 | 2.01 | 8.6 | 4.55 | 7.66 |
| **203** | 80.8 | 150.8 | 317 | 7.42 | 0.1 | 0.11 | 36.2 | 0.78 | 73.8 | 92 | 81 | 2.71 | 9.2 | 4.25 | 7.62 |
| **204** | 69.5 | 150.3 | 280 | 6.52 | 0.09 | 0.12 | 33.2 | 0.8 | 73.4 | 87 | 73 | 2.48 | 8.8 | 3.94 | 7.72 |
| **205** | 109.6 | 159.9 | 373 | 9.27 | 0.07 | 0.09 | 29.4 | 0.86 | 71 | 95 | 93 | 2.93 | 9.1 | 3.38 | 9.39 |
| **206** | 74.8 | 114 | 201 | 6.17 | 0.14 | 0.14 | 31.7 | 0.78 | 72.7 | 55 | 102 | 2.12 | 8.9 | 5 | 8.3 |
| **207** | 94.4 | 123.1 | 233 | 7.97 | 0.1 | 0.12 | 30.6 | 0.79 | 64.1 | 103 | 70 | 1.51 | 9.1 | 4.47 | 8.27 |
| **208** | 77.8 | 154.7 | 364 | 6.26 | 0.08 | 0.11 | 34.3 | 0.71 | 84.2 | 125 | 132 | 3.17 | 9.8 | 5.33 | 8.48 |
| **209** | 95.2 | 121.2 | 243 | 8.16 | 0.09 | 0.11 | 33.2 | 0.83 | 68.6 | 106 | 99 | 2.05 | 10.5 | 4.84 | 8.54 |
| **210** | 71.8 | 99.7 | 403 | 6.62 | 0.08 | 0.11 | 36.1 | 0.74 | 78.7 | 100 | 115 | 2.48 | 10.1 | 4.87 | 8.47 |

**Sex : Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **251** | 74 | 129.3 | 363 | 5.93 | 0.1 | 0.1 | 34.9 | 0.98 | 72.4 | 54 | 58 | 1.6 | 9.4 | 4.55 | 9.51 |
| **252** | 69.5 | 154.7 | 260 | 6.18 | 0.1 | 0.23 | 36.8 | 0.84 | 46.7 | 38 | 101 | 1.92 | 8.5 | 3.92 | 9.32 |
| **253** | 90.7 | 111.6 | 415 | 5.9 | 0.09 | 0.21 | 39.2 | 0.89 | 47.5 | 82 | 71 | 2.21 | 10.1 | 4.98 | 9.51 |
| **254** | 93.7 | 133.1 | 346 | 7.26 | 0.12 | 0.21 | 35.8 | 0.92 | 59.6 | 59 | 99 | 1.95 | 9.8 | 4.97 | 9.07 |
| **255** | 72.5 | 140 | 309 | 6.69 | 0.12 | 0.2 | 36.4 | 0.88 | 62.4 | 55 | 74 | 1.73 | 10.1 | 4.61 | 8.7 |
| **256** | 87.6 | 136.5 | 344 | 6.12 | 0.1 | 0.15 | 33.8 | 0.94 | 50 | 49 | 70 | 1.6 | 9.7 | 4.7 | 9.51 |
| **257** | 80.1 | 127.9 | 359 | 6.4 | 0.18 | 0.11 | 37.6 | 0.82 | 89.4 | 54 | 64 | 2.36 | 11.1 | 4.4 | 9.4 |
| **258** | 70.3 | 116.9 | 408 | 7.48 | 0.19 | 0.09 | 38 | 0.87 | 64 | 58 | 56 | 2.35 | 9.7 | 4.01 | 9.16 |
| **259** | 70.3 | 111.6 | 245 | 6.75 | 0.18 | 0.1 | 33.4 | 0.88 | 75.7 | 54 | 55 | 2.29 | 9.6 | 4.02 | 8.38 |
| **260** | 87.6 | 122.6 | 379 | 7.14 | 0.19 | 0.09 | 40.2 | 0.87 | 74.4 | 62 | 63 | 2.65 | 9.5 | 4.13 | 8.58 |

Key:ID= identification

**Appendix 4 (Contd….)**

**Biochemical Values of Individual Rats (45 Day)**

**Group III (15 mg/kg Bw) Sex : Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **301** | 86.9 | 134.1 | 280 | 8.54 | 0.08 | 0.1 | 35.9 | 0.74 | 88.6 | 159 | 100 | 2.15 | 10.5 | 4.82 | 8.08 |
| **302** | 83.1 | 136 | 328 | 7.57 | 0.1 | 0.13 | 35.8 | 0.96 | 89.4 | 118 | 103 | 2.57 | 10.3 | 4.81 | 9.3 |
| **303** | 92.9 | 157 | 226 | 7.16 | 0.09 | 0.13 | 32 | 0.87 | 81.1 | 67 | 107 | 2.15 | 9.7 | 4.12 | 8.63 |
| **304** | 92.9 | 141.3 | 259 | 8.27 | 0.08 | 0.13 | 37.4 | 0.92 | 90.7 | 116 | 113 | 2.43 | 10.2 | 4.76 | 8.59 |
| **305** | 66.5 | 135.1 | 289 | 7.27 | 0.09 | 0.1 | 34.2 | 0.83 | 66.5 | 114 | 91 | 2.15 | 9.5 | 3.72 | 9.06 |
| **306** | 80.1 | 153.7 | 317 | 7.94 | 0.08 | 0.13 | 37.6 | 0.87 | 73.5 | 115 | 94 | 2.81 | 9.6 | 3.99 | 8.48 |
| **307** | 79.3 | 138.4 | 375 | 8.28 | 0.1 | 0.16 | 36.9 | 0.92 | 78.7 | 176 | 114 | 2.55 | 10.8 | 4.44 | 9.25 |
| **308** | 101.2 | 123.1 | 327 | 8.75 | 0.08 | 0.11 | 33.9 | 0.92 | 74.4 | 114 | 85 | 2.1 | 10.1 | 4.5 | 8.47 |
| **309** | 75.6 | 123.1 | 368 | 7.58 | 0.08 | 0.11 | 37.8 | 0.87 | 100 | 71 | 88 | 2.16 | 9.6 | 4.24 | 8.38 |
| **310** | 86.9 | 142.2 | 365 | 8.56 | 0.1 | 0.11 | 35.1 | 0.86 | 69 | 113 | 79 | 2.38 | 9.5 | 4.6 | 8.51 |

**Sex : Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **351** | 89.9 | 93 | 434 | 4.9 | 0.13 | 0.09 | 40.1 | 0.79 | 85.7 | 73 | 53 | 2.53 | 10.4 | 4.13 | 8.88 |
| **352** | 73.3 | 91.1 | 275 | 4.72 | 0.17 | 0.08 | 32.3 | 0.81 | 97.8 | 78 | 49 | 2.18 | 10.5 | 4.88 | 9.12 |
| **353** | 78.6 | 126 | 322 | 6.03 | 0.18 | 0.1 | 32.9 | 0.78 | 78 | 89 | 53 | 2.68 | 9.7 | 3.94 | 9.75 |
| **354** | 108 | 93.9 | 344 | 5.38 | 0.18 | 0.11 | 35.4 | 0.86 | 92.9 | 45 | 53 | 1.92 | 9.8 | 5.6 | 9.54 |
| **355** | 87.6 | 118.8 | 247 | 6.3 | 0.16 | 0.08 | 37.5 | 0.92 | 95.1 | 43 | 55 | 2.31 | 10.4 | 5.26 | 9.89 |
| **356** | 64.2 | 104.5 | 221 | 5.36 | 0.18 | 0.11 | 28.5 | 0.84 | 97 | 42 | 48 | 1.8 | 9 | 5.74 | 9.82 |
| **357** | 92.2 | 119.8 | 351 | 5.33 | 0.13 | 0.07 | 51.5 | 1 | 82 | 52 | 54 | 1.8 | 9 | 5.44 | 9.29 |
| **358** | 76.3 | 197.7 | 364 | 6.84 | 0.14 | 0.06 | 50.8 | 0.87 | 64 | 83 | 41 | 3.35 | 9 | 4.68 | 9.14 |
| **359** | 64.2 | 108.8 | 337 | 4.98 | 0.15 | 0.08 | 42.9 | 0.8 | 71.7 | 83 | 46 | 2.26 | 9.7 | 3.98 | 8.37 |
| **360** | 100.5 | 115.5 | 435 | 8.33 | 0.18 | 0.09 | 42.4 | 0.79 | 89.4 | 70 | 40 | 2.2 | 9.1 | 4.44 | 9.36 |

Key:ID= identification

**Appendix 4 (Contd….)**

**Biochemical Values of Individual Rats (45 Day)**

**Group IV (30 mg/kg Bw) Sex : Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **401** | 77.1 | 130.7 | 427 | 7.4 | 0.06 | 0.1 | 32.9 | 0.82 | 79.2 | 115 | 96 | 2.74 | 10 | 4.62 | 8.81 |
| **402** | 68.8 | 137 | 227 | 5.88 | 0.06 | 0.09 | 30.1 | 0.78 | 75.2 | 70 | 83 | 2.58 | 8.5 | 3.66 | 7.79 |
| **403** | 87.6 | 99.2 | 266 | 7.19 | 0.07 | 0.1 | 9 | 0.89 | 84.9 | 155 | 68 | 2.06 | 9.6 | 3.86 | 8.27 |
| **404** | 59.7 | 123.6 | 247 | 6.6 | 0.29 | 0.12 | 38.7 | 0.81 | 74 | 142 | 93 | 2.78 | 9.1 | 4.47 | 8.43 |
| **405** | 82.4 | 143.2 | 344 | 6.52 | 0.1 | 0.12 | 40.6 | 0.87 | 74.4 | 96 | 71 | 1.9 | 8.7 | 3.99 | 9.02 |
| **406** | 76.3 | 148 | 341 | 6.43 | 0.09 | 0.12 | 41 | 0.83 | 72.3 | 115 | 88 | 3.59 | 9.4 | 4.21 | 9.41 |
| **407** | 75.6 | 136.5 | 243 | 6.09 | 0.37 | 0.09 | 38.8 | 0.78 | 53.7 | 92 | 98 | 3.08 | 9 | 4.32 | 8.59 |
| **408** | 99.7 | 134.6 | 444 | 8.43 | 0.08 | 0.12 | 37.9 | 0.92 | 60.2 | 101 | 88 | 1.87 | 10.6 | 5.15 | 8.45 |
| **409** | 78.6 | 113.5 | 393 | 7.94 | 0.08 | 0.13 | 36.3 | 0.68 | 67 | 105 | 75 | 1.58 | 9.4 | 4.33 | 8.22 |
| **410** | 85.4 | 124.5 | 402 | 8.6 | 0.11 | 0.12 | 38.5 | 0.74 | 80.1 | 108 | 85 | 1.69 | 9.5 | 5.27 | 8.33 |

**Sex : Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **451** | 68 | 93.5 | 222 | 6.99 | 0.1 | 0.11 | 42.6 | 0.79 | 110.8 | 85 | 46 | 1.92 | 9 | 4.16 | 8.66 |
| **452** | 77.1 | 116.9 | 254 | 7.24 | 0.19 | 0.12 | 49 | 0.75 | 93.7 | 78 | 56 | 2.14 | 10.5 | 5.03 | 10.49 |
| **453** | 94.4 | 130.7 | 355 | 8.69 | 0.19 | 0.17 | 51 | 0.79 | 81.8 | 59 | 58 | 1.75 | 10.1 | 5 | 10.28 |
| **454** | 62.7 | 89.2 | 168 | 7.19 | 0.15 | 0.09 | 32.5 | 0.67 | 124.4 | 55 | 84 | 1.24 | 10.2 | 4.15 | 8.73 |
| **455** | 90.7 | 99.7 | 284 | 7.73 | 0.19 | 0.11 | 42.9 | 0.81 | 110.4 | 81 | 52 | 2.55 | 9.4 | 4.12 | 9.07 |
| **456** | 65 | 83.9 | 183 | 7.16 | 0.21 | 0.12 | 39.7 | 0.72 | 64.8 | 45 | 65 | 1.01 | 8.8 | 4.07 | 7.88 |
| **457** | 62 | 73.9 | 247 | 6.79 | 0.21 | 0.09 | 46.7 | 0.58 | 89.8 | 75 | 85 | 1.19 | 10.1 | 4.23 | 7.99 |
| **458** | 76.3 | 75.8 | 201 | 7.74 | 0.16 | 0.11 | 44.9 | 0.67 | 90.7 | 139 | 61 | 1.85 | 10 | 4.25 | 8.06 |
| **459** | 84.6 | 103 | 304 | 9.11 | 0.21 | 0.13 | 55.9 | 0.8 | 162.9 | 77 | 95 | 1.61 | 14 | 5.06 | 11.11 |
| **460** | 98.2 | 98.7 | 482 | 9.64 | 0.18 | 0.14 | 71.5 | 0.83 | 127.8 | 103 | 68 | 1.68 | 12.5 | 5.16 | 10.55 |

Key:ID= identification

**Appendix 4 (Contd….)**

**Biochemical Values of Individual Rats (45 Day)**

**Group V (30 mg/kg Bw) Sex : Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **501** | 91.4 | 145.6 | 276 | 7.16 | 0.1 | 0.11 | 36.1 | 0.85 | 74.5 | 77 | 72 | 1.7 | 9.9 | 3.87 | 8.99 |
| **502** | 90.7 | 147 | 347 | 6.38 | 0.06 | 0.1 | 39.4 | 0.75 | 58.6 | 95 | 103 | 2.14 | 9 | 3.69 | 8.61 |
| **503** | 89.2 | 100.6 | 329 | 8.44 | 0.21 | 0.11 | 37.1 | 0.81 | 87.2 | 128 | 111 | 2.19 | 9.7 | 4.69 | 9.15 |
| **504** | 77.8 | 128.8 | 282 | 6.48 | 0.1 | 0.09 | 37.4 | 0.81 | 63.6 | 75 | 110 | 1.85 | 8.7 | 3.82 | 8.66 |
| **505** | 136.8 | 238.8 | 444 | 8.5 | 0.08 | 0.13 | 41.8 | 0.86 | 88 | 115 | 91 | 2.24 | 9.2 | 5.16 | 9.09 |

**Sex : Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **551** | 58.9 | 85.3 | 170 | 7.52 | 0.18 | 0.09 | 34.6 | 0.71 | 100.5 | 70 | 58 | 1.35 | 9.6 | 3.89 | 8.56 |
| **552** | 101.2 | 102.1 | 419 | 9.03 | 0.19 | 0.13 | 53.8 | 0.68 | 153.2 | 78 | 63 | 1.64 | 12.3 | 4.87 | 9.6 |
| **553** | 57.4 | 81 | 209 | 6.89 | 0.26 | 0.12 | 35.2 | 0.88 | 120.6 | 47 | 55 | 1.27 | 10.9 | 4.14 | 8.11 |
| **554** | 106.5 | 120.2 | 305 | 10.23 | 0.21 | 0.16 | 59.9 | 0.76 | 147.4 | 123 | 86 | 1.61 | 12.6 | 5.19 | 11.46 |
| **555** | 124.7 | 135.5 | NA | 11.64 | 0.23 | 0.13 | 73.1 | 0.98 | 130.1 | 156 | 279 | 2.41 | 14.2 | 7.27 | 11.85 |

Key:ID= identification

**Appendix 4 (Contd….)**

**Biochemical Values of Individual Rats (90 Day)**

**Group I (Vehicle Control) Sex : Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **101** | 83.9 | 143.7 | 260 | 7.36 | 0.11 | 0.13 | 31.8 | 0.78 | 70 | 87 | 97 | 2.27 | 10 | 5.28 | 8.51 |
| **102** | 123.9 | 167.6 | 296 | 6.01 | 0.1 | 0.11 | 34 | 0.78 | 56.9 | 80 | 102 | 2.85 | 9.1 | 4.86 | 8.15 |
| **103** | 71.8 | 155.1 | 262 | 6.77 | 0.08 | 0.08 | 32.1 | 0.77 | 81.2 | 90 | 86 | 2.28 | 10 | 4.21 | 8.06 |
| **104** | 77.8 | 143.7 | 303 | 6.89 | 0.12 | 0.12 | 32.7 | 0.77 | 81.2 | 90 | 86 | 2.28 | 10 | 4.21 | 8.06 |
| **105** | 77.8 | 143.7 | 303 | 6.89 | 0.12 | 0.12 | 32.7 | 0.75 | 51.6 | 71 | 92 | 3.06 | 9.2 | 5.05 | 8.22 |
| **106** | 94.4 | 145.1 | 263 | 7.12 | 0.09 | 0.12 | 33.2 | 0.83 | 69.1 | 66 | 102 | 2.02 | 9.2 | 3.52 | 8.44 |
| **107** | 75.6 | 139.8 | 262 | 6.37 | 0.08 | 0.08 | 29.5 | 0.77 | 72 | 84 | 83 | 2.72 | 9.3 | 4.91 | 8.37 |
| **108** | 79.3 | 122.1 | 298 | 7.42 | 0.08 | 0.11 | 32.4 | 0.8 | 76.3 | 103 | 93 | 2.14 | 10.1 | 4.24 | 8.38 |
| **109** | 100.5 | 78.6 | 399 | 5.03 | 0.08 | 0.12 | 29.8 | 0.86 | 67.2 | 87 | 82 | 1.8 | 8.6 | 4.37 | 8.67 |
| **110** | 101.2 | 131.2 | 237 | 7.97 | 0.05 | 0.12 | 36 | 0.85 | 71.5 | 128 | 86 | 2.86 | 8.9 | 3.47 | 9.03 |

**Sex : Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **151** | 99.7 | 137 | NA | 7.45 | 0.08 | 0.11 | 30.2 | 1 | 74 | 73 | 65 | 2.64 | 10 | 4.66 | 10.18 |
| **152** | 123.2 | 238.8 | NA | 7.23 | 0.03 | 0.11 | 34.7 | 0.95 | 85.1 | 65 | 129 | 3 | 10.2 | 4.25 | 10.58 |
| **153** | 96 | 175.7 | NA | 5.66 | 0.06 | 0.12 | 32.3 | 0.91 | 85.5 | 67 | 98 | 2.41 | 9.9 | 4.37 | 10.47 |
| **154** | 111.1 | 197.7 | NA | 6.99 | 0.07 | 0.12 | 33.4 | 0.91 | 68.9 | 73 | 83 | 2.9 | 10.1 | 4.99 | 9.88 |
| **155** | 94.4 | 176.2 | NA | 5.69 | 0.04 | 0.15 | 38.5 | 0.82 | 48.9 | 81 | 122 | 2.34 | 9.9 | 5.22 | 10.54 |
| **156** | 77.1 | 135.5 | NA | 5.51 | 0.05 | 0.06 | 44.2 | 0.83 | 52.9 | 113 | 112 | 3 | 14.9 | 4.83 | 9.26 |
| **157** | 104.3 | 152.3 | NA | 6.94 | 0.01 | 0.1 | 40.2 | 0.84 | 87.2 | 115 | 94 | 3.19 | 13.7 | 4.68 | 9.04 |
| **158** | 83.9 | 143.7 | NA | 4.68 | 0.06 | 0.07 | 37.7 | 0.84 | 79.3 | 92 | 98 | 2.96 | 14.5 | 5.2 | 9.22 |
| **159** | 68.8 | 120.7 | NA | 5.74 | 0.02 | 0.09 | 41 | 0.79 | 81 | 133 | 98 | 4.12 | 13.4 | 4.54 | 8.71 |
| **160** | 67.2 | 114 | NA | 6.49 | 0.03 | 0.1 | 37 | 0.77 | 79.4 | 111 | 97 | 2.51 | 13.5 | 5.47 | 8.46 |

Key:ID= identification

**Appendix 4 (Contd….)**

**Biochemical Values of Individual Rats (90 Day)**

**Group II (3 mg/kg Bw) Sex : Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **201** | 104.3 | 131.7 | 282 | 5.54 | 0.11 | 0.11 | 28.6 | 0.82 | 70.7 | 62 | 70 | 1.57 | 7.8 | 3.93 | 8.03 |
| **202** | 98.2 | 136.5 | 277 | 5.75 | 0.11 | 0.1 | 32.5 | 0.8 | 55.2 | 83 | 79 | 1.75 | 7.7 | 4.35 | 8.39 |
| **203** | 116.4 | 145.6 | 266 | 6.96 | 0.08 | 0.12 | 34.6 | 0.86 | 66.1 | 115 | 89 | 1.8 | 8.1 | 4.83 | 9.92 |
| **204** | 97.5 | 150.8 | 275 | 6.34 | 0.1 | 0.1 | 39.3 | 0.84 | 54.9 | 77 | 101 | 2.12 | 9.7 | 4.59 | 8.95 |
| **205** | 109.6 | 147 | 355 | 6.71 | 0.05 | 0.09 | 41 | 0.83 | 84.5 | 135 | 102 | 3.08 | 10.4 | 3.97 | 9.51 |
| **206** | 73.3 | 103.5 | 176 | 6.19 | 0.09 | 0.09 | 33.2 | 0.79 | 59.1 | 66 | 84 | 1.75 | 9.1 | 4.97 | 7.78 |
| **207** | 75.6 | 93 | 260 | 6.12 | 0.11 | 0.13 | 36.4 | 0.8 | 72.7 | 100 | 99 | 2.11 | 9.9 | 4.37 | 8.44 |
| **208** | 92.2 | 127.9 | 361 | 5.94 | 0.08 | 0.09 | 35.2 | 0.8 | 72.5 | 107 | 100 | 2.52 | 9.8 | 4.23 | 8.46 |
| **209** | 92.9 | 136 | 203 | 6.55 | 0.09 | 0.09 | 34.2 | 0.82 | 59.8 | 86 | 91 | 2.19 | 9.1 | 4.22 | 8.08 |
| **210** | 105 | 112.6 | 324 | 8.54 | 0.11 | 0.11 | 36.2 | 0.9 | 76.8 | 86 | 99 | 2.61 | 9.4 | 4.17 | 8.3 |

**Sex : Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **251** | 77.8 | 143.2 | NA | 5.56 | 0.04 | 0.11 | 38 | 0.75 | 72.4 | 84 | 114 | 2.51 | 13.5 | 4.53 | 11.23 |
| **252** | 114.1 | NA | NA | 7.64 | 0.01 | 0.1 | 39.5 | 0.88 | 46.7 | 157 | 110 | 3.82 | 13.2 | 4.47 | 10.15 |
| **253** | 80.8 | 146 | NA | 5.22 | 0.12 | 0.16 | 35.9 | 0.87 | 47.5 | 90 | 99 | 2.7 | 13.9 | 4.5 | 11.26 |
| **254** | 60.4 | 131.7 | NA | 5.97 | 0.08 | 0.11 | 31.2 | 0.9 | 59.6 | 70 | 104 | 2.38 | 13 | 4.4 | 9.7 |
| **255** | 83.1 | 131.2 | NA | 5.01 | 0.06 | 0.11 | 31.9 | 0.86 | 62.4 | 128 | 99 | 3.49 | 13.4 | 4.51 | 9.68 |
| **256** | 93.7 | 185.2 | NA | 8.5 | 0.1 | 0.09 | 34.2 | 0.93 | 89.4 | 52 | 89 | 2.09 | 13.3 | 3.96 | 9.64 |
| **257** | 77.8 | 143.2 | NA | 5.56 | 0.06 | 0.11 | 38 | 0.75 | 72.4 | 84 | 114 | 2.51 | 13.5 | 4.53 | 9.68 |
| **258** | 69.5 | 134.1 | NA | 5.48 | 0.04 | 0.08 | 41.9 | 0.8 | 52.9 | 99 | 84 | 3.11 | 12.8 | 4.8 | 9.01 |
| **259** | 70.3 | 117.4 | NA | 5.16 | 0.03 | 0.09 | 38.5 | 0.84 | 66.4 | 92 | 72 | 2.96 | 12.7 | 4.25 | 11 |
| **260** | 58.9 | 131.7 | NA | 4.97 | 0.04 | 0.07 | 41.7 | 0.76 | 49.8 | 69 | 74 | 2.85 | 12.3 | 4.3 | 9.86 |

Key:ID= identification, NA : Not analysed

**Appendix 4 (Contd….)**

**Biochemical Values of Individual Rats (90 Day)**

**Group III (15 mg/kg Bw) Sex : Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **301** | 92.2 | 145.6 | 234 | 5.61 | 0.06 | 0.1 | 37.8 | 0.84 | 90 | 105 | 84 | 2.36 | 9.7 | 3.84 | 7.85 |
| **302** | 96 | 132.7 | 289 | 6.17 | 0.1 | 0.11 | 43.9 | 0.88 | 70.5 | 116 | 90 | 2.88 | 9.5 | 3.84 | 8.99 |
| **303** | 102.8 | 139.8 | 251 | 6.2 | 0.08 | 0.08 | 35.4 | 0.82 | 68 | 111 | 70 | 2.34 | 9 | 3.88 | 7.99 |
| **304** | 86.1 | 95.4 | 210 | 5.59 | 0.07 | 0.1 | 37.8 | 0.81 | 97.3 | 125 | 96 | 2.58 | 9.8 | 3.85 | 8.62 |
| **305** | 82.4 | 132.2 | 266 | 5.76 | 0.09 | 0.1 | 37.1 | 0.85 | 63 | 100 | 74 | 2.29 | 9.2 | 4.15 | 8.85 |
| **306** | 100.5 | 123.6 | 453 | 6.01 | 0.1 | 0.11 | 37.5 | 0.82 | 60.7 | 102 | 77 | 2.6 | 9.2 | 4.37 | 8.29 |
| **307** | 570.4 | 641.3 | 255 | 5.68 | 0.11 | 0.12 | 37.7 | 0.91 | 64.8 | 99 | 72 | 2.12 | 8.9 | 3.9 | 8.76 |
| **308** | 76.3 | 112.6 | 270 | 5.78 | 0.1 | 0.09 | 35.9 | 0.79 | 70.8 | 88 | 70 | 2 | 8.9 | 3.79 | 7.8 |
| **309** | 83.9 | 136.5 | 301 | 6.53 | 0.09 | 0.1 | 34.6 | 0.7 | 56.7 | 92 | 65 | 1.92 | 8.6 | 4.29 | 8.56 |
| **310** | 94.4 | 113.5 | 283 | 6.92 |  | 0.1 | 41.7 | 0.86 | 82.4 | 174 | 102 | 3.49 | 13.2 | 5.09 | 9.25 |

**Sex : Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **351** | 74.8 | 120.2 | NA | 5.55 | 0.08 | 0.08 | 31.6 | 0.75 | 49.3 | 89 | 68 | 2.38 | 12.5 | 3.93 | 9.95 |
| **352** | 68.8 | 139.8 | NA | 6.1 | 0.09 | 0.11 | 33.8 | 0.84 | 87.2 | 67 | 82 | 2 | 11.8 | 4.66 | 8.88 |
| **353** | 65 | 131.2 | NA | 5.66 | 0.06 | 0.09 | 35.9 | 0.78 | 76.6 | 104 | 92 | 3.34 | 13.4 | 4.42 | 8.05 |
| **354** | 80.8 | 145.6 | NA | 5.39 | 0.08 | 0.12 | 38.6 | 0.84 | 74 | 91 | 110 | 2.71 | 11.4 | 5.17 | 8.55 |
| **355** | 74 | 121.7 | NA | 4.38 | 0.1 | 0.13 | 41.7 | 0.83 | 85.8 | 73 | 90 | 3 | 12.9 | 3.99 | 8.86 |
| **356** | 75.6 | 103 | NA | 5.3 | 0.05 | 0.1 | 40.2 | 0.8 | 103.9 | 102 | 107 | 3.12 | 12.1 | 5.19 | 8.3 |
| **357** | 79.3 | 119.3 | NA | 6.2 | 0.06 | 0.11 | 40.7 | 0.86 | 94.4 | 109 | 110 | 3.42 | 12 | 4.42 | 9.17 |
| **358** | 68.8 | 135.5 | NA | 6.58 | 0.07 | 0.1 | 43.2 | 0.85 | 102 | 95 | 91 | 3.45 | 12.8 | 4.23 | 8.58 |
| **359** | 62.7 | 108.3 | NA | 5.86 | 0.05 | 0.11 | 96.6 | 0.79 | 92.9 | 97 | 108 | 2.4 | 11.7 | 4.68 | 8.82 |
| **360** | 75.6 | 116.9 | NA | 5.38 | 0.12 | 0.11 | 36.6 | 0.83 | 90.1 | 77 | 96 | 2.5 | 12.2 | 4.25 | 8.28 |

Key:ID= identification , NA : Not analyzed

**Appendix 4 (Contd….)**

**Biochemical Values of Individual Rats (90 Day)**

**Group IV (30 mg/kg Bw) Sex : Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **401** | 114.8 | 142.2 | 268 | 6.74 | 0.08 | 0.09 | 39.3 | 0.96 | 68.4 | 115 | 90 | 2.62 | 11.9 | 4.5 | 8.88 |
| **402** | 112.6 | 144.6 | 251 | 6.41 | 0.03 | 0.12 | 41.4 | 1 | 85.5 | 94 | 114 | 2.15 | 12.5 | 4.67 | 8.62 |
| **403** | 96 | 141.7 | 259 | 6.75 | 0.09 | 0.1 | 41.9 | 0.93 | 63.4 | 95 | 100 | 1.86 | 11 | 4.98 | 8.76 |
| **404** | 71.8 | 123.1 | 227 | 5.9 | 0.01 | 0.08 | 34.7 | 0.86 | 48.7 | 115 | 96 | 2.5 | 12.3 | 3.76 | 8.37 |
| **405** | 84.6 | 109.7 | 287 | 5.68 | 0.06 | 0.08 | 41.1 | 0.89 | 65.7 | 101 | 100 | 2.55 | 11.8 | 4.72 | 7.93 |
| **406** | 89.9 | 125.5 | 295 | 6.07 | 0.06 | 0.07 | 38.2 | 0.84 | 49.5 | 128 | 100 | 2.59 | 11.4 | 4.11 | 8.41 |
| **407** | 87.6 | 138.4 | 275 | 6.03 | 0.04 | 0.1 | 40.5 | 0.88 | 51 | 119 | 86 | 2.24 | 11.4 | 4.2 | 8.19 |
| **408** | 83.1 | 122.6 | 370 | 6.12 | 0.04 | 0.07 | 45.2 | 0.84 | 69.8 | 116 | 91 | 2.01 | 11 | 3.78 | 8.02 |
| **409** | 71.8 | 97.8 | 200 | 5.68 | 0.1 | 0.07 | 39.4 | 0.81 | 73.9 | 80 | 100 | 1.51 | 11 | 3.46 | 7.78 |
| **410** | 109.6 | 150.3 | 185 | 7.27 | 0.1 | 0.11 | 42.3 | 0.92 | 70.9 | 117 | 93 | 2.26 | 11.2 | 4.05 | 8.56 |

**Sex : Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **451** | 65 | 148 | NA | 6.56 | 0.06 | 0.13 | 35.1 | 0.77 | 102.7 | 70 | 90 | 1.95 | 11.2 | 3.61 | 7.94 |
| **452** | 70.3 | 136.5 | NA | 6.38 | 0.07 | 0.11 | 32.9 | 0.84 | 99.8 | 66 | 74 | 1.9 | 11 | 3.88 | 8.16 |
| **453** | 81.6 | 148.4 | NA | 6.51 | 0.09 | 0.15 | 33.3 | 0.8 | 112.7 | 82 | 85 | 2.26 | 11.1 | 3.94 | 8.2 |
| **454** | 74.8 | 117.4 | NA | 5.59 | 0.11 | 0.15 | 37.9 | 0.74 | 95.5 | 86 | 82 | 2.87 | 12.1 | 4.78 | 8.19 |
| **455** | 61.2 |  | NA | 5.35 | 0.1 | 0.13 | 32.1 | 0.74 | 109.3 | 71 | 83 | 1.91 | 10.4 | 4.04 | 7.79 |
| **456** | 82.4 | 140.3 | NA | 6.03 | 0.08 | 0.14 | 37.3 | 0.92 | 65 | 54 | 92 | 2.05 | 91 | 4.97 | 8.59 |
| **457** | 82.4 | 78.2 | NA | 5.46 | 0.08 | 0.08 | 40.6 | 0.82 | 109.7 | 83 | 74 | 2.44 | 10.6 | 4.96 | 8.44 |
| **458** | 68.8 | 116.9 | NA | 4.86 | 0.08 | 0.12 | 35.4 | 0.85 | 109.5 | 57 | 84 | 2.07 | 8.9 | 4.45 | 9.05 |
| **459** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **460** | 62.7 | 80.6 | NA | 4.97 | 0.09 | 0.11 | 40.1 | 0.85 | 107.9 | 59 | 79 | 1.7 | 9.3 | 3.75 | 8.51 |

Key:ID= identification , NA : Not analyzed

**Appendix 4 (Contd….)**

**Biochemical Values of Individual Rats (90 Day)**

**Group V (30 mg/kg Bw) Sex : Male**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **501** | 157.2 | 143.2 | 425 | 5.88 | 0.07 | 0.09 | 37.3 | 0.91 | 77.1 | 99 | 75 | 2.48 | 11 | 3.88 | 8.93 |
| **502** | 94.4 | 98.7 | NA | 5.46 | 0.07 | 0.09 | 42 | 0.89 | 76 | 112 | 69 | 1.88 | 10.8 | 3.87 | 8.58 |
| **503** | 79.3 | 158.5 | NA | 6.8 | 0.03 | 0.1 | 38.8 | 0.88 | 62.6 | 89 | 67 | 1.94 | 10.4 | 3.79 | 12.41 |
| **504** | 113.3 | 136 | NA | 7.08 | 0.04 | 0.11 | 40.2 | 0.92 | 60.5 | 149 | 79 | 2.68 | 11 | 4.29 | 8.9 |
| **505** | 120.9 | 127.9 | NA | 6.61 | 0.1 | 0.11 | 40.8 | 0.92 | 53.3 | 118 | 84 | 2.02 | 10.9 | 4.97 | 9.12 |

**Sex : Female**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal**  **ID** | **ALT** | **AST** | **ALP** | **Phosphorus** | **Direct Bilirubin** | **Total Bilirubin** | **UREA** | **Creatinine** | **Glucose** | **Triglyceride** | **Cholesterol** | **Uric Acid** | **Calcium** | **Albumin** | **Total Protein** |
| **551** | 92.2 | 132.7 | NA | 6.74 | 0.08 | 0.1 | 37.4 | 0.91 | 69.7 | 77 | 80 | 2.66 | 8.7 | 4.32 | 8.94 |
| **552** | 81.6 | 119.3 | NA | 5.72 | 0.08 | 0.11 | 41.1 | 0.84 | 101.6 | 110 | 75 | 2.69 | 9.6 | 4.6 | 9.42 |
| **553** | 76.3 | 110.7 | NA | 5.45 | 0.05 | 0.11 | 41.1 | 0.81 | 80.3 | 117 | 130 | 3.43 | 9.2 | 4.22 | 9.26 |
| **554** | 74 | 109.7 | NA | 4.97 | 0.06 | 0.1 | 37.8 | 0.81 | 77.8 | 114 | 102 | 3.29 | 9.2 | 5.84 | 10.26 |
| **555** | 81.6 | 122.1 | NA | 5.18 | 0.05 | 0.06 | 46 | 0.79 | 71.5 | 89 | 95 | 3.27 | 8.3 | 5.28 | 9.9 |

Key:ID= identification , NA : Not analyzed

**Appendix 5**

**Terminal Body Weight and Absolute Organ Weight of individual Rat (gms)**

**Group I (Vehicle Control) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Body Weight** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Testis** | **Epididymis** | **Spleen** | **Brain** |
| **101** | 452 | 15.46 | 3.36 | 1.93 | 0.08 | 4.19 | 1.98 | 0.84 | 2.28 |
| **102** | 374 | 12.18 | 2.82 | 1.62 | 0.112 | 3.82 | 1.57 | 0.72 | 2.16 |
| **103** | 486 | 14.18 | 3.44 | 1.9 | 0.064 | 4.33 | 1.97 | 0.83 | 2.37 |
| **104** | 442 | 16.21 | 3.26 | 1.71 | NA | 3.84 | 1.59 | 0.8 | 2.25 |
| **105** | 412 | 14.02 | 3.22 | 1.87 | NA | 3.62 | 1.78 | 0.78 | 2.19 |
| **106** | 376 | 13.7 | 2.75 | 1.84 | 0.14 | 3.73 | 1.78 | 0.83 | 2.19 |
| **107** | 440 | 14.37 | 3.04 | 1.58 | NA | 3.76 | 1.46 | 0.75 | 2.15 |
| **108** | 420 | 15.56 | 3.13 | 1.72 | 0.13 | 3.78 | 1.88 | 0.89 | 2.25 |
| **109** | 378 | 19.09 | 3.11 | 1.92 | 0.11 | 3.64 | 1.87 | 0.7 | 2.19 |
| **110** | 460 | 15.84 | 3.27 | 1.68 | 0.13 | 4.35 | 2.05 | 0.99 | 2.18 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Body Weight** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Ovaries** | **Uterus** | **Spleen** | **Brain** |
| **151** | 314 | 9.997 | 2.487 | 1.231 | 0.11 | 0.319 | 0.781 | 0.718 | 2.095 |
| **152** | 254 | 8.273 | 2.019 | 0.981 | 0.13 | 0.457 | 1.28 | 0.71 | 1.684 |
| **153** | 274 | 10.52 | 2.38 | 1.19 | 0.04 | 0.17 | 1.24 | 0.85 | 2.05 |
| **154** | 248 | 9.943 | 2.049 | 1.006 | 0.125 | 0.16 | 0.842 | 0.729 | 1.857 |
| **155** | 332 | 10.18 | 2.567 | 1.207 | 0.119 | 0.242 | 0.644 | 0.75 | 1.93 |
| **156** | 304 | 11.24 | 2.41 | 1.25 | 0.032 | 0.173 | 0.935 | 0.802 | 1.992 |
| **157** | 254 | 9.831 | 2.327 | 1.275 | 0.133 | 0.457 | 0.841 | 0.64 | 1.987 |
| **158** | 290 | 9.285 | 2.12 | 0.902 | 0.15 | 0.13 | 2.018 | 0.715 | 1.741 |
| **159** | 250 | 8.56 | 1.836 | 0.959 | 0.115 | 0.257 | 0.918 | 0.651 | 1.835 |
| **160** | 232 | 8.16 | 1.774 | 1.14 | 0.1 | 0.165 | 0.891 | 0.66 | 1.872 |

Key:ID= identification, NA : Not analyzed

**Appendix 5 (Contd….)**

**Terminal Body Weight and Absolute Organ Weight of individual Rat (gms)**

**Group II (3 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Body Weight** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Testis** | **Epididymis** | **Spleen** | **Brain** |
| **201** | 396 | 12.37 | 3.11 | 1.72 | 0.13 | 3.47 | 1.49 | 0.85 | 2.25 |
| **202** | 512 | 18.46 | 3.87 | 2.12 | 0.14 | 3.92 | 1.87 | 1.2 | 2.22 |
| **203** | 484 | 16.85 | 3.05 | 1.77 | 0.11 | 4.27 | 1.91 | 0.96 | 2.32 |
| **204** | 416 | 17.01 | 3.2 | 1.81 | 0.13 | 3.98 | 2.11 | 0.77 | 2.28 |
| **205** | 418 | 14.5 | 2.88 | NA | 0.08 | 3.94 | 2.05 | 0.99 | 2.18 |
| **206** | 442 | 15.36 | 3.08 | 1.63 | 0.13 | 4.09 | 1.7 | 0.92 | 2.14 |
| **207** | 410 | 13.48 | 3.16 | 1.29 | 0.14 | 3.82 | 1.77 | 1.09 | 2.14 |
| **208** | 420 | 15.36 | 2.69 | 1.57 | 0.81 | 4.01 | 1.83 | 0.94 | 2.32 |
| **209** | 472 | 17.52 | 3.78 | 1.81 | 0.13 | 4.28 | 1.78 | 1 | 2.31 |
| **210** | 410 | 10.74 | 3.06 | 1.38 | 0.85 | 3.84 | 1.69 | 0.93 | 2.1 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Body Weight** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Ovaries** | **Uterus** | **Spleen** | **Brain** |
| **251** | 266 | 9.718 | 2.236 | 1.202 | 0.081 | 0.205 | 1.159 | 0.702 | 2.103 |
| **252** | 270 | 10.67 | 2.54 | 1.095 | 0.037 | 0.209 | 0.649 | 0.965 | 2.027 |
| **253** | 266 | 9.53 | 2.357 | 0.999 | 0.027 | 0.235 | 1.072 | 0.77 | 2.093 |
| **254** | 264 | 11.259 | 2.716 | 1.206 | 0.066 | 0.243 | 0.892 | 1.051 | 2.157 |
| **255** | 268 | 8.961 | 2.429 | 1.23 | 0.035 | 0.097 | 1.209 | 0.72 | 2.188 |
| **256** | 268 | 8.616 | 2.409 | NA | 0.074 | 0.183 | 0.812 | 633 | 2.066 |
| **257** | 352 | 8.243 | 2.277 | 1.341 | 0.057 | 0.28 | 0.664 | 0.675 | 1.96 |
| **258** | 206 | 6.514 | 1.629 | 0.926 | 0.07 | 0.221 | 1.22 | 0.55 | 1.842 |
| **259** | 248 | 10.43 | 2.119 | 1.091 | 0.076 | 0.165 | 1.172 | 0.688 | 1.878 |
| **260** | 224 | 7.59 | 1.848 | 1.002 | 0.07 | 0.189 | 0.767 | 0.678 | 2.012 |

Key:ID= identification , NA : Not analyzed

**Appendix 5 (Contd….)**

**Terminal Body Weight and Absolute Organ Weight of individual Rat (gms)**

**Group III (15 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Body Weight** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Testis** | **Epididymis** | **Spleen** | **Brain** |
| **301** | 499 | 16.36 | 3.91 | 1.57 | 0.1 | 3.79 | 1.91 | 0.96 | 2.31 |
| **302** | 468 | 11.96 | 2.57 | 1.72 | 0.09 | 4.126 | 1.8 | 0.83 | 2.23 |
| **303** | 408 | 11.47 | 2.74 | 1.61 | 0.073 | 4.01 | 1.58 | 0.98 | 2.24 |
| **304** | 464 | 15.46 | 2.93 | 1.53 | 0.12 | 4.13 | 1.8 | 1.05 | 2.18 |
| **305** | 444 | 14.5 | 2.95 | 1.46 | 0.13 | 4.08 | 2.1 | 1.02 | 2.3 |
| **306** | 416 | 12.51 | 2.86 | 1.43 | 0.8 | 4.64 | 1.76 | 0.999 | 2.21 |
| **307** | 434 | 11.76 | 2.68 | 1.28 | 0.9 | 4.08 | 1.95 | 0.91 | 2.18 |
| **308** | 418 | 11.88 | 2.63 | 1.63 | 0.13 | 3.94 | 1.64 | 0.98 | 1.99 |
| **309** | 456 | 14.04 | 2.93 | 1.96 | 0.53 | 4.52 | 1.79 | 1.13 | 2.2 |
| **310** | 470 | 16.33 | 3.26 | 1.92 |  | 3.74 | 2.36 | 0.96 | 2.13 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Body Weight** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Ovaries** | **Uterus** | **Spleen** | **Brain** |
| **351** | 324 | 10.971 | 2.471 | 1.209 | 0.072 | 0.208 | 0.928 | 0.707 | 1.961 |
| **352** | 346 | 9.128 | 2.023 | 1.04 | 0.076 | 0.456 | 0.994 | 0.682 | 2.052 |
| **353** | 278 | 8.901 | 2.309 | 1.034 | 0.067 | 0.129 | 0.825 | 0.788 | 1.935 |
| **354** | 268 | 10.29 | 2.307 | 1.242 | 0.064 | 0.207 | 0.863 | 0.724 | 1.884 |
| **355** | 274 | 9.044 | 2.693 | 1.348 | 0.072 | 0.183 | 1.226 | 0.758 | 2.037 |
| **356** | 258 | 9.024 | 2.435 | 0.949 | 0.057 | 0.208 | 0.961 | 693 | 1.838 |
| **357** | 260 | 10.052 | 2.076 | 1.14 | 0.047 | NA | NA | 0.645 | 1.902 |
| **358** | 240 | 9.077 | 2.091 | 0.971 | 0.071 | 0.22 | 0.724 | 880 | 1.798 |
| **359** | 236 | 7.955 | 2.074 | 0.912 | 0.065 | 0.167 | 0.917 | 0.628 | 1.869 |
| **360** | 244 | 8.248 | 2.18 | 1.093 | 0.11 | 0.176 | 1.445 | 0.802 | 1.8 |

Key:ID= identification , NA : Not analyzed

**Appendix 5 (Contd….)**

**Terminal Body Weight and Absolute Organ Weight of individual Rat (gms)**

**Group IV (30 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Body Weight** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Testis** | **Epididymis** | **Spleen** | **Brain** |
| **401** | 510 | 18.8 | 3.86 | 1.48 | 0.12 | 4.22 | 1.67 | 0.99 | 2.05 |
| **402** | 416 | 14.84 | 3.43 | 1.5 | 0.72 | 3.64 | 1.89 | 0.93 | 2.17 |
| **403** | 436 | 13.84 | 3.03 | 1.57 | 0.13 | 3.76 | 1.8 | 0.82 | 2.08 |
| **404** | 460 | 12.06 | 2.78 | 1.65 | 0.79 | 4.16 | 1.85 | 1.06 | 2.07 |
| **405** | 406 | 11.38 | 2.69 | 1.43 | 0.83 | 3.83 | 1.92 | 0.9 | 1.79 |
| **406** | 468 | 13.63 | 3.23 | 1.84 | 0.85 | 4.2 | 1.91 | 0.98 | 2.04 |
| **407** | 460 | 12.16 | 2.69 | 1.45 | 0.13 | 4.32 | 1.67 | 0.98 | 1.99 |
| **408** | 460 | 13.07 | 3.22 | 1.84 | 0.12 | 3.97 | 1.88 | 0.94 | 1.92 |
| **409** | 456 | 14.02 | 3.09 | 1.46 | 0.13 | 4.03 | 1.81 | 0.99 | 2.18 |
| **410** | 444 | 15.91 | 3.31 | 1.6 | 0.87 | 3.79 | 1.79 | 0.98 | 2.2 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Body Weight** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Ovaries** | **Uterus** | **Spleen** | **Brain** |
| **451** | 262 | 9.096 | 2.298 | 1.206 | 0.085 | NA | NA | 0.734 | 2.472 |
| **452** | 282 | 8.209 | 2.389 | 1.236 | 0.07 | 0.229 | 1.258 | 0.718 | 2.053 |
| **453** | 254 | 8.493 | 2.129 | 1.074 | 0.196 | 0.223 | 0.862 | 0.827 | 2.16 |
| **454** | 298 | 1.008 | 2.658 | 1.223 | 0.064 | 0.135 | 0.288 | 0.81 | 2.198 |
| **455** | 274 | 8.708 | 2.368 | 1.046 | 0.07 | 0.149 | 0.654 | 0.656 | 2.049 |
| **456** | 252 | 8.545 | 2.403 | 1.11 | 0.057 | 0.157 | 0.721 | 0.811 | 2.058 |
| **457** | 272 | 10.723 | 2.399 | 1.104 | 0.062 | 0.269 | 0.92 | 0.832 | 2.242 |
| **458** | 248 | 7.559 | 2.009 | 0.921 | 0.052 | 0.171 | 0.734 | 0.67 | 1.964 |
| **459** | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **460** | 256 | 8.995 | 2.18 | 0.907 | 0.107 | NA | NA | NA | 2.108 |

Key:ID= identification , NA : Not analyzed

**Appendix 5 (Contd….)**

**Terminal Body Weight and Absolute Organ Weight of individual Rat (gms)**

**Group V (30 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Body Weight** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Testis** | **Epididymis** | **Spleen** | **Brain** |
| **501** | 414 | 13.75 | 2.852 | 1.663 | 0.162 | 3.907 | 1.783 | 0.696 | 1.967 |
| **502** | 454 | 16.96 | 3.103 | 2.249 | 0.131 | 4.159 | 1.894 | 0.87 | 2.072 |
| **503** | 452 | 19.53 | 3.136 | 2.105 | 0.12 | 4.116 | 1.791 | 0.985 | 2.054 |
| **504** | 476 | 17.57 | 3.949 | 2.098 | NA | 4.157 | 2.196 | 1.046 | 2.056 |
| **505** | 462 | 19.9 | 3.334 | 2.135 | 0.131 | 4.386 | 2.057 | 0.986 | 2.105 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Body Weight** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Ovaries** | **Uterus** | **Spleen** | **Brain** |
| **551** | 280 | 9.29 | 1.888 | 1.085 | 0.04 | 0.142 | 1.323 | 0.73 | 2.067 |
| **552** | 268 | 9.876 | 1.934 | 1.395 | 0.071 | 0.128 | 1.254 | 0.687 | 2.092 |
| **553** | 270 | 9.451 | 1.986 | 1.08 | NA | 0.125 | 0.753 | 0.755 | 2.03 |
| **554** | 252 | 10.955 | 1.932 | 1.199 | 0.098 | 0.148 | 1.286 | 0.749 | 2.134 |
| **555** | 270 | 10.075 | 1.689 | 1.265 | 0.09 | 0.105 | 0.935 | 0.59 | 2.09 |
| **551** | 280 | 9.29 | 1.888 | 1.085 | 0.04 | 0.142 | 1.323 | 0.73 | 2.067 |

Key:ID= identification , NA : Not analyzed

**Appendix 5 (Contd….)**

**Relative Organ Weight of individual Rat (%)**

**Group I (Vehicle Control) Sex: Male**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Testis** | **Epididymis** | **Spleen** | **Brain** |
| **101** | 3.420 | 0.743 | 0.427 | 0.018 | 0.927 | 0.438 | 0.186 | 0.504 |
| **102** | 3.257 | 0.754 | 0.433 | 0.030 | 1.021 | 0.420 | 0.193 | 0.578 |
| **103** | 2.918 | 0.708 | 0.391 | 0.013 | 0.891 | 0.405 | 0.171 | 0.488 |
| **104** | 3.667 | 0.738 | 0.387 | NA | 0.869 | 0.360 | 0.181 | 0.509 |
| **105** | 3.403 | 0.782 | 0.454 | NA | 0.879 | 0.432 | 0.189 | 0.532 |
| **106** | 3.644 | 0.731 | 0.489 | 0.037 | 0.992 | 0.473 | 0.221 | 0.582 |
| **107** | 3.266 | 0.691 | 0.359 | NA | 0.855 | 0.332 | 0.170 | 0.489 |
| **108** | 3.705 | 0.745 | 0.410 | 0.031 | 0.900 | 0.448 | 0.212 | 0.536 |
| **109** | 5.050 | 0.823 | 0.508 | 0.029 | 0.963 | 0.495 | 0.185 | 0.579 |
| **110** | 3.443 | 0.711 | 0.365 | 0.028 | 0.946 | 0.446 | 0.215 | 0.474 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Ovaries** | **Uterus** | **Spleen** | **Brain** |
| **151** | 3.184 | 0.792 | 0.392 | 0.035 | 0.102 | 0.249 | 0.229 | 0.667 |
| **152** | 3.257 | 0.795 | 0.386 | 0.051 | 0.180 | 0.504 | 0.280 | 0.663 |
| **153** | 3.839 | 0.869 | 0.434 | 0.015 | 0.062 | 0.453 | 0.310 | 0.748 |
| **154** | 4.009 | 0.826 | 0.406 | 0.050 | 0.065 | 0.340 | 0.294 | 0.749 |
| **155** | 3.066 | 0.773 | 0.364 | 0.036 | 0.073 | 0.194 | 0.226 | 0.581 |
| **156** | 3.697 | 0.793 | 0.411 | 0.011 | 0.057 | 0.308 | 0.264 | 0.655 |
| **157** | 3.870 | 0.916 | 0.502 | 0.052 | 0.180 | 0.331 | 0.252 | 0.782 |
| **158** | 3.202 | 0.731 | 0.311 | 0.052 | 0.045 | 0.696 | 0.247 | 0.600 |
| **159** | 3.424 | 0.734 | 0.384 | 0.046 | 0.103 | 0.367 | 0.260 | 0.734 |
| **160** | 3.517 | 0.765 | 0.491 | 0.043 | 0.071 | 0.384 | 0.284 | 0.807 |

Key:ID= identification , NA : Not analyzed

**Appendix 5 (Contd….)**

**Relative Organ weight of individual Rat (%)**

**Group II (3 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Testis** | **Epididymis** | **Spleen** | **Brain** |
| **201** | 3.124 | 0.785 | 0.434 | 0.033 | 0.876 | 0.376 | 0.215 | 0.568 |
| **202** | 3.605 | 0.756 | 0.414 | 0.027 | 0.766 | 0.365 | 0.234 | 0.434 |
| **203** | 3.481 | 0.630 | 0.366 | 0.023 | 0.882 | 0.395 | 0.198 | 0.479 |
| **204** | 4.089 | 0.769 | 0.435 | 0.031 | 0.957 | 0.507 | 0.185 | 0.548 |
| **205** | 3.469 | 0.689 | NA | 0.019 | 0.943 | 0.490 | 0.237 | 0.522 |
| **206** | 3.475 | 0.697 | 0.369 | 0.029 | 0.925 | 0.385 | 0.208 | 0.484 |
| **207** | 3.288 | 0.771 | 0.315 | 0.034 | 0.932 | 0.432 | 0.266 | 0.522 |
| **208** | 3.657 | 0.640 | 0.374 | 0.193 | 0.955 | 0.436 | 0.224 | 0.552 |
| **209** | 3.712 | 0.801 | 0.383 | 0.028 | 0.907 | 0.377 | 0.212 | 0.489 |
| **210** | 2.620 | 0.746 | 0.337 | 0.207 | 0.937 | 0.412 | 0.227 | 0.512 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Ovaries** | **Uterus** | **Spleen** | **Brain** |
| **251** | 3.653 | 0.841 | 0.452 | 0.030 | 0.077 | 0.436 | 0.264 | 0.791 |
| **252** | 3.952 | 0.941 | 0.406 | 0.014 | 0.077 | 0.240 | 0.357 | 0.751 |
| **253** | 3.583 | 0.886 | 0.376 | 0.010 | 0.088 | 0.403 | 0.289 | 0.787 |
| **254** | 4.265 | 1.029 | 0.457 | 0.025 | 0.092 | 0.338 | 0.398 | 0.817 |
| **255** | 3.344 | 0.906 | 0.459 | 0.013 | 0.036 | 0.451 | 0.269 | 0.816 |
| **256** | 3.215 | 0.899 | 0.000 | 0.028 | 0.068 | 0.303 | 0.022 | 0.771 |
| **257** | 2.342 | 0.647 | 0.381 | 0.016 | 0.080 | 0.189 | 0.192 | 0.557 |
| **258** | 3.162 | 0.791 | 0.450 | 0.034 | 0.107 | 0.592 | 0.267 | 0.894 |
| **259** | 4.206 | 0.854 | 0.440 | 0.031 | 0.067 | 0.473 | 0.277 | 0.757 |
| **260** | 3.388 | 0.825 | 0.447 | 0.031 | 0.084 | 0.342 | 0.303 | 0.898 |

Key:ID= identification , NA : Not analyzed

**Appendix 5 (Contd….)**

**Relative Organ Weight of individual Rat (%)**

**Group III (15 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Testis** | **Epididymis** | **Spleen** | **Brain** |
| **301** | 3.279 | 0.784 | 0.315 | 0.020 | 0.760 | 0.383 | 0.192 | 0.463 |
| **302** | 2.556 | 0.549 | 0.368 | 0.019 | 0.882 | 0.385 | 0.177 | 0.476 |
| **303** | 2.811 | 0.672 | 0.395 | 0.018 | 0.983 | 0.387 | 0.240 | 0.549 |
| **304** | 3.332 | 0.631 | 0.330 | 0.026 | 0.890 | 0.388 | 0.226 | 0.470 |
| **305** | 3.266 | 0.664 | 0.329 | 0.029 | 0.919 | 0.473 | 0.230 | 0.518 |
| **306** | 3.007 | 0.688 | 0.344 | 0.192 | 1.115 | 0.423 | 0.240 | 0.531 |
| **307** | 2.710 | 0.618 | 0.295 | 0.207 | 0.940 | 0.449 | 0.210 | 0.502 |
| **308** | 2.842 | 0.629 | 0.390 | 0.031 | 0.943 | 0.392 | 0.234 | 0.476 |
| **309** | 3.079 | 0.643 | 0.430 | 0.116 | 0.991 | 0.393 | 0.248 | 0.482 |
| **310** | 3.474 | 0.694 | 0.409 | 0.000 | 0.796 | 0.502 | 0.204 | 0.453 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Ovaries** | **Uterus** | **Spleen** | **Brain** |
| **351** | 3.386 | 0.763 | 0.373 | 0.022 | 0.064 | 0.286 | 0.218 | 0.605 |
| **352** | 2.638 | 0.585 | 0.301 | 0.022 | 0.132 | 0.287 | 0.197 | 0.593 |
| **353** | 3.202 | 0.831 | 0.372 | 0.024 | 0.046 | 0.297 | 0.283 | 0.696 |
| **354** | 3.840 | 0.861 | 0.463 | 0.024 | 0.077 | 0.322 | 0.270 | 0.703 |
| **355** | 3.301 | 0.983 | 0.492 | 0.026 | 0.067 | 0.447 | 0.277 | 0.743 |
| **356** | 3.498 | 0.944 | 0.368 | 0.022 | 0.081 | 0.372 | 0.269 | 0.712 |
| **357** | 3.866 | 0.798 | 0.438 | 0.018 | 0.000 | 0.000 | 0.248 | 0.732 |
| **358** | 3.782 | 0.871 | 0.405 | 0.030 | 0.092 | 0.302 | 0.367 | 0.749 |
| **359** | 3.371 | 0.879 | 0.386 | 0.028 | 0.071 | 0.389 | 0.266 | 0.792 |
| **360** | 3.380 | 0.893 | 0.448 | 0.045 | 0.072 | 0.592 | 0.329 | 0.738 |

Key:ID= identification , NA : Not analyzed

**Appendix 5 (Contd….)**

**Relative Organ Weight of individual Rat (%)**

**Group IV (30 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Testis** | **Epididymis** | **Spleen** | **Brain** |
| **401** | 3.686 | 0.757 | 0.290 | 0.024 | 0.827 | 0.327 | 0.194 | 0.402 |
| **402** | 3.567 | 0.825 | 0.361 | 0.173 | 0.875 | 0.454 | 0.224 | 0.522 |
| **403** | 3.174 | 0.695 | 0.360 | 0.030 | 0.862 | 0.413 | 0.188 | 0.477 |
| **404** | 2.622 | 0.604 | 0.359 | 0.172 | 0.904 | 0.402 | 0.230 | 0.450 |
| **405** | 2.803 | 0.663 | 0.352 | 0.204 | 0.943 | 0.473 | 0.222 | 0.441 |
| **406** | 2.912 | 0.690 | 0.393 | 0.182 | 0.897 | 0.408 | 0.209 | 0.436 |
| **407** | 2.643 | 0.585 | 0.315 | 0.028 | 0.939 | 0.363 | 0.213 | 0.433 |
| **408** | 2.841 | 0.700 | 0.400 | 0.026 | 0.863 | 0.409 | 0.204 | 0.417 |
| **409** | 3.075 | 0.678 | 0.320 | 0.029 | 0.884 | 0.397 | 0.217 | 0.478 |
| **410** | 3.583 | 0.745 | 0.360 | 0.196 | 0.854 | 0.403 | 0.221 | 0.495 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Ovaries** | **Uterus** | **Spleen** | **Brain** |
| **451** | 3.472 | 0.877 | 0.460 | 0.032 | 0.000 | 0.000 | 0.280 | 0.944 |
| **452** | 2.911 | 0.847 | 0.438 | 0.025 | 0.081 | 0.446 | 0.255 | 0.728 |
| **453** | 3.344 | 0.838 | 0.423 | 0.077 | 0.088 | 0.339 | 0.326 | 0.850 |
| **454** | 0.338 | 0.892 | 0.410 | 0.021 | 0.045 | 0.097 | 0.272 | 0.738 |
| **455** | 3.178 | 0.864 | 0.382 | 0.026 | 0.054 | 0.239 | 0.239 | 0.748 |
| **456** | 3.391 | 0.954 | 0.440 | 0.023 | 0.062 | 0.286 | 0.322 | 0.817 |
| **457** | 3.942 | 0.882 | 0.406 | 0.023 | 0.099 | 0.338 | 0.306 | 0.824 |
| **458** | 3.048 | 0.810 | 0.371 | 0.021 | 0.069 | 0.296 | 0.270 | 0.792 |
| **459** | M | M | M | M | M | M | M | M |
| **460** | 3.514 | 0.852 | 0.354 | 0.042 | 0.000 | 0.000 | 0.000 | 0.823 |

Key:ID= identification, M: Found Dead

**Appendix 5 (Contd….)**

**Relative Organ Weight of individual Rat (%)**

**Group V (30 mg/kg Bw) Sex: Male**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Testis** | **Epididymis** | **Spleen** | **Brain** |
| **501** | 3.321 | 0.689 | 0.402 | 0.039 | 0.944 | 0.431 | 0.168 | 0.475 |
| **502** | 3.736 | 0.683 | 0.495 | 0.029 | 0.916 | 0.417 | 0.192 | 0.456 |
| **503** | 4.321 | 0.694 | 0.466 | 0.027 | 0.911 | 0.396 | 0.218 | 0.454 |
| **504** | 3.691 | 0.830 | 0.441 | NA | 0.873 | 0.461 | 0.220 | 0.432 |
| **505** | 4.307 | 0.722 | 0.462 | 0.028 | 0.949 | 0.445 | 0.213 | 0.456 |

**Sex: Female**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Animal ID** | **Liver** | **Kidneys** | **Heart** | **Adrenal Glands** | **Ovaries** | **Uterus** | **Spleen** | **Brain** |
| **551** | 3.318 | 0.674 | 0.388 | 0.014 | 0.051 | 0.473 | 0.261 | 0.738 |
| **552** | 3.685 | 0.722 | 0.521 | 0.026 | 0.048 | 0.468 | 0.256 | 0.781 |
| **553** | 3.500 | 0.736 | 0.400 | NA | 0.046 | 0.279 | 0.280 | 0.752 |
| **554** | 4.347 | 0.767 | 0.476 | 0.039 | 0.059 | 0.510 | 0.297 | 0.847 |
| **555** | 3.731 | 0.626 | 0.469 | 0.033 | 0.039 | 0.346 | 0.219 | 0.774 |
| **551** | 3.318 | 0.674 | 0.388 | 0.014 | 0.051 | 0.473 | 0.261 | 0.738 |

Key:ID= identification , NA : Not analyzed

# Appendix 6

# Individual Animal Histopathology Data

# Group I (Vehicle Control) Sex: Male

|  |  |  |
| --- | --- | --- |
| **Animal ID** | **Gross Examination** | **Microscopic Observations** |
| **101** | NAD | Kidney: Small focus of basophilic regenerative renal tubules (+)  Lungs: Alveolar histiocytosis, focal (+); Increased size of BALT (++) |
| **102** | NAD | Lungs: Mixed leukocytic infiltration around bronchiolar lumen (++++) – Severe lobar bronchopneumonia.  Larynx: MNC infiltration in submucosa (++)  Mesentric LN: Increased histiocytes in medullary sinuses (+) |
| **103** | NAD | NAD |
| **104** | NAD | Larynx: MNC infiltration in submucosa (+) |
| **105** | NAD | Testes: Atrophy of seminiferous tubules near vasa recta (++)- Unilateral |
| **106** | NAD | Kidney: Small focus of basophilic regenerative renal tubules (+) |
| **107** | NAD | Eye: Atrophy of retinal epithelium (++) |
| **108** | NAD | Lungs: Mixed leukocytic infiltration in & around bronchiolar lumen, multifocal (+++) - Moderate Lobar bronchopneumonia.  Heart: MNC infiltration in myocardium, focal (+)  Colon: Enlarged GALT (+)  Larynx: MNC infiltration in submucosa (++) |
| **109** | NAD | Spleen: Increased EMH, focal (+)  Kidney: Vacuolar degeneration in cortical tubules, focal (+)  Larynx: MNC infiltration in submucosa (+) |
| **110** | NAD | Kidney: Small focus of basophilic regenerative renal tubules (+)  Larynx: MNC infiltration in submucosa (++) |

**Key:** += Minimal, ++= Mild, +++= Moderate, +++++= Severe; MNC= Mononuclear Cells, LN= Lymph Node, GALT= Gut Associated Lymphoid Tissue, BALT= Bronchiole Associated Lymphoid Tissue, EMH= Extra Medullary Haematopoiesis. NAD=No Abnormality detected

# Appendix 6 (Contd…)

# Individual Animal Histopathology Data

# Group I (Vehicle Control) Sex: Female

|  |  |  |
| --- | --- | --- |
| **Animal ID** | **Gross**  **Examination** | **Microscopic Observations** |
| **151** | NAD | Kidney: Vacuolar degeneration in cortical tubules mainly at cortico-medullary junction, multifocal (+)  Adrenal gland: Vacuolar degeneration & cellular swelling at zona granulose layer, focal (+)  Spleen: Increased EMH, focal (+)  Larynx: MNC infiltration in submucosa (+) |
| **152** | NAD | Larynx: MNC infiltration in submucosa (+) |
| **153** | NAD | Lung: Enlarged BALT, focal (+)  Cervical LN: Increased histiocytes in medullary sinuses (+) |
| **154** | NAD | Lungs: Alveolar haemorrhage, focal (+)  Larynx: MNC infiltration in submucosa (+) |
| **155** | NAD | NAD |
| **156** | NAD | Lungs: MNC infiltration in & around bronchiolar lumen, focal (++)- Mild Lobar bronchopneumonia  Larynx: MNC infiltration in submucosa (+) |
| **157** | NAD | Liver: Hepatocellular hypertrophy, Focal (+)  Thymus: Decreased density of lymphocytes & increased prominence of epithelial cells, focal (+) |
| **158** | NAD | NAD |
| **159** | NAD | Adrenal Gland: Congested sinuses (+) |
| **160** | NAD | Thymus: Decreased density of lymphocytes & increased prominence of epithelial cells, focal (+)  Larynx: MNC infiltration in submucosa (++)  Lacrimal gland: MNC infiltration in interstitium, focal (+) |

**Key:** += Minimal, ++= Mild, +++= Moderate, +++++= Severe; MNC= Mononuclear Cells, LN= Lymph Node, GALT= Gut Associated Lymphoid Tissue, BALT= Bronchiole Associated Lymphoid Tissue, EMH= Extra Medullary Haematopoiesis. NAD=No Abnormality detected

# Appendix 6 (Contd…)

# Individual Animal Histopathology Data

**Group II (3 mg/kg Bw) Sex: Male**

|  |  |  |
| --- | --- | --- |
| **Animal ID** | **Gross Examination** | **Microscopic Observations** |
| **201** | NAD | **-** |
| **202** | NAD | **-** |
| **203** | NAD | **-** |
| **204** | NAD | **-** |
| **205** | NAD | **-** |
| **206** | NAD | **-** |
| **207** | NAD | **-** |
| **208** | NAD | **-** |
| **209** | NAD | **-** |
| **210** | NAD | **-** |

## Group II (3 mg/kg Bw) Sex: Female

|  |  |  |
| --- | --- | --- |
| **Animal ID** | **Gross**  **Examination** | **Microscopic Observations** |
| **251** | NAD | **-** |
| **252** | NAD | **-** |
| **253** | NAD | **-** |
| **254** | NAD | **-** |
| **255** | NAD | **-** |
| **256** | NAD | **-** |
| **257** | NAD | **-** |
| **258** | NAD | **-** |
| **259** | NAD | **-** |
| **260** | NAD | **-** |

NAD=No Abnormality detected, -=Tissues were not subjected to histopathology

# Appendix 6 (Contd…)

# Individual Animal Histopathology Data

**Group III (15 mg/kg Bw) Sex: Male**

|  |  |  |
| --- | --- | --- |
| **Animal ID** | **Gross Examination** | **Microscopic Observations** |
| **301** | NAD | **-** |
| **302** | NAD | **-** |
| **303** | NAD | **-** |
| **304** | NAD | **-** |
| **305** | NAD | **-** |
| **306** | NAD | **-** |
| **307** | NAD | **-** |
| **308** | NAD | **-** |
| **309** | NAD | **-** |
| **310** | NAD | **-** |

## Group III (15 mg/kg Bw) Sex: Female

|  |  |  |
| --- | --- | --- |
| **Animal ID** | **Gross**  **Examination** | **Microscopic Observations** |
| **351** | NAD | **-** |
| **352** | NAD | **-** |
| **353** | NAD | **-** |
| **354** | NAD | **-** |
| **355** | NAD | **-** |
| **356** | NAD | **-** |
| **357** | NAD | **-** |
| **358** | NAD | **-** |
| **359** | NAD | **-** |
| **360** | NAD | **-** |

NAD=No Abnormality detected, -=Tissues were not subjected to histopathology

# Appendix 6 (Contd…)

# Individual Animal Histopathology Data

# Group IV (30 mg/kg Bw) Sex: Male

|  |  |  |
| --- | --- | --- |
| **Animal ID** | **Gross Examination** | **Microscopic Observations** |
| **401** | NAD | Liver: Congested sinuses (+)  Kidney: Congested capillaries (+)  Heart: Small focus of myocardial degeneration with MNC infiltration in right ventricular wall (+)  Larynx: MNC infiltration in submucosa (+) |
| **402** | NAD | Liver: Hepatocellular hypertrophy, focal (+)  Kidney: Dilated medullary tubules, focal (+)  Colon: Enlarged GALT (++) |
| **403** | NAD | Larynx: MNC infiltration in submucosa & haemorrhage(+) |
| **404** | NAD | Kidney: MNC infiltration at corticomedullary junction, focal (+)  Larynx: MNC infiltration in submucosa (+)  Eye: Atrophy of retinal epithelium (++) |
| **405** | NAD | Lungs: Focus of acute inflammatory response with enlarged Type II pneumocytes (+) |
| **406** | NAD | NAD |
| **407** | NAD | Lungs: Increased size of BALT in one lobe (+)  Spleen: Increased EMH, focal (+)  Larynx: MNC infiltration in submucosa (+) |
| **408** | NAD | Kidney: Small focus of basophilic regenerative renal tubules (+)  Larynx: MNC infiltration in submucosa (+)  Colon: Enlarged GALT (++) |
| **409** | NAD | Kidney: Small focus of basophilic regenerative renal tubules (+) |
| **410** | NAD | Testes: Atrophy of seminiferous tubules multifocal (+++)- Unilateral |

**Key:** += Minimal, ++= Mild, +++= Moderate, +++++= Severe; MNC= Mononuclear Cells, LN= Lymph Node, GALT= Gut Associated Lymphoid Tissue, BALT= Bronchiole Associated Lymphoid Tissue, EMH= Extra Medullary Haematopoiesis. NAD=No Abnormality detected

# Appendix 6 (Contd…)

# Individual Animal Histopathology Data

# Group IV (30 mg/kg Bw) Sex: Female

|  |  |  |
| --- | --- | --- |
| **Animal ID** | **Gross Examination** | **Microscopic Observations** |
| **451** | NAD | Lungs: Leukocytic infiltration in & around bronchiolar lumen, multifocal (+++)- Moderate Lobar bronchopneumonia  Thymus: Decreased density of lymphocytes & increased prominence of epithelial cells, focal (++)  Larynx: Leukocytic infiltration in submucosa, mucosa & lumen (++) |
| **452** | NAD | NAD |
| **453** | NAD | NAD |
| **454** | NAD | Larynx: MNC infiltration in submucosa (+) |
| **455** | NAD | Liver: MNC infiltration, focal (+)  Lungs: Increased size of BALT, Focal (+)  Colon: Increased size of GALT & lymphocytic infiltration in submucosa & mucosa (++)  Larynx: MNC infiltration in submucosa (++) |
| **456** | NAD | Liver: Hepatocellular hypertrophy, Focal (+) |
| **457** | NAD | Liver: MNC infiltration, Focal (+)  Spleen: Increased EMH, focal (+)  Larynx: MNC infiltration in submucosa (+) |
| **458** | NAD | Colon: Increased size of GALT (++) |
| **459\*** | Found Dead | Kidney: Renal tubular dilatation, multifocal (+)  Spleen: Reduction in size of white pulp (++)  Thymus: Decreased density of lymphocytes (++) & formation of cystic spaces lined by epithelium.  Brain: Meninges filled with cells & debris of suppurative inflammation (+++); Similar focal, suppurative inflammation also present in superficial area of cerebellum & cerebrum. |
| **460** | NAD | Larynx: MNC infiltration in submucosa (+) |

**Key:** += Minimal, ++= Mild, +++= Moderate, +++++= Severe; MNC= Mononuclear Cells, LN= Lymph Node, GALT= Gut Associated Lymphoid Tissue, BALT= Bronchiole Associated Lymphoid Tissue, EMH= Extra Medullary Haematopoiesis.

\*- Found Dead animal. The death of this animal cannot be attributed to treatment. Histopathologically, it was visible that this animal had infection in meninges & brain resulting into suppurative inflammation. NAD=No Abnormality detected

# Appendix 6 (Contd…)

# Individual Animal Histopathology Data

**Group V : Satellite (30 mg/kg Bw) Sex: Male**

|  |  |  |
| --- | --- | --- |
| **Animal ID** | **Gross Examination** | **Microscopic Observations** |
| **501** | NAD | **-** |
| **502** | NAD | **-** |
| **503** | NAD | **-** |
| **504** | NAD | **-** |
| **505** | NAD | **-** |

## Group V : Satellite (30 mg/kg Bw) Sex: Female

|  |  |  |
| --- | --- | --- |
| **Animal ID** | **Gross Examination** | **Microscopic Observations** |
| **551** | NAD | **-** |
| **552** | NAD | **-** |
| **553** | NAD | **-** |
| **554** | NAD | **-** |
| **555** | NAD | **-** |

NAD=No Abnormality detected, -=Tissues were not subjected to histopathology

# Appendix 7

**Summarized Histopathology Findings in Males**

|  |  |  |
| --- | --- | --- |
| **Tissue & Histopathology Observations** | **Group I**  **(VC)** | **Group IV**  **(30 mg/kgBw)** |
| **Number of animals examined** | **10** | **10** |
| Lungs |  |  |
| Alveolar histiocytosis, focal (+) | 1 | 0 |
| Increased size of BALT (+) to (++) | 1 | 1 |
| Leukocytic infiltration in & around bronchiolar lumen (+++) to (++++) | 2 | 0 |
| Focus of acute inflammatory response with enlarged Type II pneumocytes (+) | 0 | 1 |
| Larynx |  |  |
| MNC infiltration in submucosa (+) to (++) | 5 | 5 |
| Haemorrhage in submucosa (+) | 0 | 1 |
| Heart |  |  |
| MNC infiltration &/myocardial degeneration in Myocardium, focal (+) | 1 | 1 |
| **Liver** |  |  |
| Congested sinuses (+) | 0 | 1 |
| Hepatocellular hypertrophy, focal (+) | 0 | 1 |
| Spleen |  |  |
| Increased EMH, focal (+) | 1 | 1 |
| Kidney |  |  |
| Small focus of / focal basophilic regenerative renal tubules (+) | 3 | 2 |
| Congested capillaries (+) | 0 | 1 |
| MNC infiltration at corticomedullary junction, focal (+) | 0 | 1 |
| Dilated medullary tubules, focal (+) | 0 | 1 |
| Vacuolar degeneration in cortical tubules, focal (+) | 1 | 0 |
| Mesentric LN |  |  |
| Increased histiocytes in medullary sinuses (+) | 1 | 0 |
| **Colon** |  |  |
| Enlarged GALT (+) | 1 | 2 |
| Testes |  |  |
| Atrophy of seminiferous tubules near vasa recta (++)- unilateral | 1 | 0 |
| Atrophy of seminiferous tubules, multifocal (++)- unilateral | 0 | 1 |
| Eye |  |  |
| Atrophy of retinal epithelium (++) | 1 | 1 |

**Key:** += Minimal, ++= Mild, +++= Moderate, +++++= Severe; MNC= Mononuclear Cells, LN= Lymph Node, GALT= Gut Associated Lymphoid Tissue, BALT= Bronchiole Associated Lymphoid Tissue, EMH= Extra Medullary Haematopoiesis.

# Appendix 7

# Summarized Histopathology Findings in Females

|  |  |  |
| --- | --- | --- |
| **Tissue & Histopathology Observations** | **Group I**  **(VC)** | **Group IV**  **(30 mg/kgBw)** |
| **Number of animals examined** | **10** | **10** |
| Lungs |  |  |
| Alveolar haemorrhage, focal (+) | 1 | 0 |
| Increased size of BALT (+) to (++) | 1 | 1 |
| MNC infiltration in & around bronchiolar lumen, focal (++) | 1 | 0 |
| Leukocytic infiltration in & around bronchiolar lumen, multifocal (+++) | 0 | 1 |
| Larynx |  |  |
| MNC infiltration in submucosa (+) to (++) | 5 | 4 |
| Leukocytic infiltration in submucosa, mucosa & lumen (++) | 0 | 1 |
| **Liver** |  |  |
| MNC infiltration, focal (+) | 0 | 2 |
| Hepatocellular hypertrophy, focal (+) | 1 | 1 |
| Spleen |  |  |
| Increased EMH, focal (+) | 1 | 1 |
| Reduction in white pulp (++)\* | 0 | 1 |
| Kidney |  |  |
| Dilated renal tubules, multifocal (+) | 0 | 1 |
| Vacuolar degeneration in cortical tubules, multifocal (+) | 1 | 0 |
| Adrenal Gland |  |  |
| Congested sinuses (+) | 1 | 0 |
| Vacuolar degeneration & cellular swelling at zona granulose layer, focal (+) | 1 | 0 |
| Thymus |  |  |
| Decreased density of lymphocytes & increased prominence of epithelial cells, focal (+) to (++) | 2 | 2 |
| Cervical LN |  |  |
| Increased histiocytes in medullary sinuses (+) | 1 | 0 |
| **Colon** |  |  |
| Enlarged GALT (+) | 0 | 1 |
| Brain |  |  |
| Suppurative inflammation of meninges & superficial parenchyma of cerebrum & cerebellum (+++)\* | 0 | 1 |
| Lacrimal Gland |  |  |
| MNC infiltration in interstitium, focal (+) | 1 | 0 |

**Key:** += Minimal, ++= Mild, +++= Moderate, +++++= Severe; MNC= Mononuclear Cells, LN= Lymph Node, GALT= Gut Associated Lymphoid Tissue, BALT= Bronchiole Associated Lymphoid Tissue, EMH= Extra Medullary Haematopoiesis. \*= These lesions were observed in Ani. No. 459F (Found Dead animal). The death of this animal cannot be attributed to treatment. Histopathologically, it was visible that this animal had infection in meninges & brain resulting into suppurative inflammation.