MAYO CLINIC
Mayo Medical Laboratories

TEST DEFINITION

03/11/2011

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MML                                Name/order code cross-reference
Code   Name
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89220  Hyper IgM Panel, B

MML                                  MML Test setup information
  ORDER      EFF                                                                                    Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220(profile)            Hyper IgM Panel, B
   9336      9/30/2010     T- and B-Cell QN by Flow Cytometry                                     MCR
                     Transport temp : Ambient <72 hours\Refrig <72 hours OK\Frozen NO
                     9336     T- & B-Cell QN by Flow Cytometry
                            -  -  -  -  -
                     3321     CD45 Lymph Count, Flow
                                 Units: thou/mcL
                                    NO SEX
                                 No age        :                          ; #NN3321
                                 1D to 17Y     : 0.66-4.60                ; 0.66-4.60
                                 18Y to 55Y    : 0.99-3.15                ; 0.99-3.15
                                 56Y to 150Y   : 1.00-3.33                ; 1.00-3.33
                                    MALE
                                 No age        :                          ; #NN3321
                                 1D to 17Y     : 0.66-4.60                ; 0.66-4.60
                                 18Y to 55Y    : 0.99-3.15                ; 0.99-3.15
                                 56Y to 150Y   : 1.00-3.33                ; 1.00-3.33
                                    FEMALE
                                 No age        :                          ; #NN3321
                                 1D to 17Y     : 0.66-4.60                ; 0.66-4.60
                                 18Y to 55Y    : 0.99-3.15                ; 0.99-3.15
                                 56Y to 150Y   : 1.00-3.33                ; 1.00-3.33
                            -  -  -  -  -
                     3316     % CD3 (T Cells)
                                 Units: %
                                    NO SEX
                                 No age        :                          ; #N3316
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MML ORDER CODE	EFF DATE	TC	TITLE	Checking Normals	Print normals (# coded)	Perform Site *
89220 (continued)						
		3316	% CD3 (T Cells) (continued)			
			1D to 2M	: 53-84	; 53-84	
			3M to 5M	: 51-77	; 51-77	
			6M to 11M	: 49-76	; 49-76	
			12M to 23M	: 53-75	; 53-75	
			24M to 5Y	: 56-75	; 56-75	
			6Y to 11Y	: 60-76	; 60-76	
			12Y to 17Y	: 56-84	; 56-84	
			18Y to 55Y	: 59-83	; 59-83	
			56Y to 150Y	: 49-87	; 49-87	
			MALE			
			No age	:	; #N3316	
			1D to 2M	: 53-84	; 53-84	
			3M to 5M	: 51-77	; 51-77	
			6M to 11M	: 49-76	; 49-76	
			12M to 23M	: 53-75	; 53-75	
			24M to 5Y	: 56-75	; 56-75	
			6Y to 11Y	: 60-76	; 60-76	
			12Y to 17Y	: 56-84	; 56-84	
			18Y to 55Y	: 59-83	; 59-83	
			56Y to 150Y	: 49-87	; 49-87	
			FEMALE			
			No age	:	; #N3316	
			1D to 2M	: 53-84	; 53-84	
			3M to 5M	: 51-77	; 51-77	
			6M to 11M	: 49-76	; 49-76	
			12M to 23M	: 53-75	; 53-75	
			24M to 5Y	: 56-75	; 56-75	
			6Y to 11Y	: 60-76	; 60-76	
			12Y to 17Y	: 56-84	; 56-84	
			18Y to 55Y	: 59-83	; 59-83	
			56Y to 150Y	: 49-87	; 49-87	
		- - - - -				
		3318	% CD19 (B Cells)			
			Units: %			
			NO SEX			
			No age	:	; #N3318	
			1D to 2M	: 6-32	; 6-32	
			3M to 5M	: 11-41	; 11-41	
			6M to 11M	: 14-37	; 14-37	
			12M to 23M	: 16-35	; 16-35	
			24M to 5Y	: 14-33	; 14-33	
			6Y to 11Y	: 13-27	; 13-27	
			12Y to 17Y	: 6-23	; 6-23	
			18Y to 55Y	: 6-22	; 6-22	
			56Y to 150Y	: 3-20	; 3-20	

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                                 MALE
                              No age        :                          ; #N3318
                              1D to 2M      : 6-32                     ; 6-32
                              3M to 5M      : 11-41                    ; 11-41


MML                                 MML Test setup information
  ORDER      EFF                                                                          Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
                    3318     % CD19 (B Cells)  (continued)
                              6M to 11M     : 14-37                    ; 14-37
                              12M to 23M    : 16-35                    ; 16-35
                              24M to 5Y     : 14-33                    ; 14-33
                              6Y to 11Y     : 13-27                    ; 13-27
                              12Y to 17Y    : 6-23                     ; 6-23
                              18Y to 55Y    : 6-22                     ; 6-22
                              56Y to 150Y   : 3-20                     ; 3-20
                                 FEMALE
                              No age        :                          ; #N3318
                              1D to 2M      : 6-32                     ; 6-32
                              3M to 5M      : 11-41                    ; 11-41
                              6M to 11M     : 14-37                    ; 14-37
                              12M to 23M    : 16-35                    ; 16-35
                              24M to 5Y     : 14-33                    ; 14-33
                              6Y to 11Y     : 13-27                    ; 13-27
                              12Y to 17Y    : 6-23                     ; 6-23
                              18Y to 55Y    : 6-22                     ; 6-22
                              56Y to 150Y   : 3-20                     ; 3-20
                         -  -  -  -  -
                    4054     % CD16+CD56 (NK cells)
                              Units: %
                                 NO SEX
                              No age        :                          ; #N4054
                              1D to 2M      : 4-18                     ; 4-18
                              3M to 5M      : 3-14                     ; 3-14
                              6M to 23M     : 3-15                     ; 3-15
                              24M to 11Y    : 4-17                     ; 4-17
                              12Y to 17Y    : 3-22                     ; 3-22
                              18Y to 55Y    : 6-27                     ; 6-27
                              56Y to 150Y   : 6-35                     ; 6-35
                                 MALE
                              No age        :                          ; #N4054
                              1D to 2M      : 4-18                     ; 4-18
                              3M to 5M      : 3-14                     ; 3-14
                              6M to 23M     : 3-15                     ; 3-15
                              24M to 11Y    : 4-17                     ; 4-17
                              12Y to 17Y    : 3-22                     ; 3-22
                              18Y to 55Y    : 6-27                     ; 6-27
                              56Y to 150Y   : 6-35                     ; 6-35
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                                   FEMALE
                                No age        :                          ; #N4054
                                1D to 2M      : 4-18                     ; 4-18
                                3M to 5M      : 3-14                     ; 3-14
                                6M to 23M     : 3-15                     ; 3-15
                                24M to 11Y    : 4-17                     ; 4-17
                                12Y to 17Y    : 3-22                     ; 3-22
                                18Y to 55Y    : 6-27                     ; 6-27
                                56Y to 150Y   : 6-35                     ; 6-35
                            -  -  -  -  -


MML                                  MML Test setup information
  ORDER      EFF                                                                                  Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
                     3319     % CD4 (Helper Cells)
                                Units: %
                                   NO SEX
                                No age        :                          ; #N3319
                                1D to 2M      : 35-64                    ; 35-64
                                3M to 5M      : 35-56                    ; 35-56
                                6M to 11M     : 31-56                    ; 31-56
                                12M to 23M    : 32-51                    ; 32-51
                                24M to 5Y     : 28-47                    ; 28-47
                                6Y to 11Y     : 31-47                    ; 31-47
                                12Y to 17Y    : 31-52                    ; 31-52
                                18Y to 55Y    : 31-59                    ; 31-59
                                56Y to 150Y   : 32-67                    ; 32-67
                                   MALE
                                No age        :                          ; #N3319
                                1D to 2M      : 35-64                    ; 35-64
                                3M to 5M      : 35-56                    ; 35-56
                                6M to 11M     : 31-56                    ; 31-56
                                12M to 23M    : 32-51                    ; 32-51
                                24M to 5Y     : 28-47                    ; 28-47
                                6Y to 11Y     : 31-47                    ; 31-47
                                12Y to 17Y    : 31-52                    ; 31-52
                                18Y to 55Y    : 31-59                    ; 31-59
                                56Y to 150Y   : 32-67                    ; 32-67
                                   FEMALE
                                No age        :                          ; #N3319
                                1D to 2M      : 35-64                    ; 35-64
                                3M to 5M      : 35-56                    ; 35-56
                                6M to 11M     : 31-56                    ; 31-56
                                12M to 23M    : 32-51                    ; 32-51
                                24M to 5Y     : 28-47                    ; 28-47
                                6Y to 11Y     : 31-47                    ; 31-47
                                12Y to 17Y    : 31-52                    ; 31-52
                                18Y to 55Y    : 31-59                    ; 31-59
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                              56Y to 150Y   : 32-67                    ; 32-67
                         -  -  -  -  -
                    3320     % CD8 (Supp'r Cells)
                              Units: %
                                 NO SEX
                              No age        :                          ; #N3320
                              1D to 2M      : 12-28                    ; 12-28
                              3M to 5M      : 12-23                    ; 12-23
                              6M to 11M     : 12-24                    ; 12-24
                              12M to 23M    : 14-30                    ; 14-30
                              24M to 5Y     : 16-30                    ; 16-30
                              6Y to 17Y     : 18-35                    ; 18-35
                              18Y to 55Y    : 12-38                    ; 12-38
                              56Y to 150Y   : 8-40                     ; 8-40
                                 MALE
                              No age        :                          ; #N3320


MML                                 MML Test setup information
  ORDER      EFF                                                                          Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
                    3320     % CD8 (Supp'r Cells)  (continued)
                              1D to 2M      : 12-28                    ; 12-28
                              3M to 5M      : 12-23                    ; 12-23
                              6M to 11M     : 12-24                    ; 12-24
                              12M to 23M    : 14-30                    ; 14-30
                              24M to 5Y     : 16-30                    ; 16-30
                              6Y to 17Y     : 18-35                    ; 18-35
                              18Y to 55Y    : 12-38                    ; 12-38
                              56Y to 150Y   : 8-40                     ; 8-40
                                 FEMALE
                              No age        :                          ; #N3320
                              1D to 2M      : 12-28                    ; 12-28
                              3M to 5M      : 12-23                    ; 12-23
                              6M to 11M     : 12-24                    ; 12-24
                              12M to 23M    : 14-30                    ; 14-30
                              24M to 5Y     : 16-30                    ; 16-30
                              6Y to 17Y     : 18-35                    ; 18-35
                              18Y to 55Y    : 12-38                    ; 12-38
                              56Y to 150Y   : 8-40                     ; 8-40
                         -  -  -  -  -
                    3322     CD3 (T Cells)
                              Units: cells/mcL
                                 NO SEX
                              No age        :                          ; #N3322
                              1D to 2M      : 2500-5500                ; 2500-5500
                              3M to 5M      : 2500-5600                ; 2500-5600
                              6M to 11M     : 1900-5900                ; 1900-5900
                              12M to 23M    : 2100-6200                ; 2100-6200
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                                24M to 5Y     : 1400-3700                ; 1400-3700
                                6Y to 11Y     : 1200-2600                ; 1200-2600
                                12Y to 17Y    : 1000-2200                ; 1000-2200
                                18Y to 55Y    : 677-2383                 ; 677-2383
                                56Y to 150Y   : 617-2254                 ; 617-2254
                                   MALE
                                No age        :                          ; #N3322
                                1D to 2M      : 2500-5500                ; 2500-5500
                                3M to 5M      : 2500-5600                ; 2500-5600
                                6M to 11M     : 1900-5900                ; 1900-5900
                                12M to 23M    : 2100-6200                ; 2100-6200
                                24M to 5Y     : 1400-3700                ; 1400-3700
                                6Y to 11Y     : 1200-2600                ; 1200-2600
                                12Y to 17Y    : 1000-2200                ; 1000-2200
                                18Y to 55Y    : 677-2383                 ; 677-2383
                                56Y to 150Y   : 617-2254                 ; 617-2254
                                   FEMALE
                                No age        :                          ; #N3322
                                1D to 2M      : 2500-5500                ; 2500-5500
                                3M to 5M      : 2500-5600                ; 2500-5600
                                6M to 11M     : 1900-5900                ; 1900-5900
                                12M to 23M    : 2100-6200                ; 2100-6200


MML                                  MML Test setup information
  ORDER      EFF                                                                          Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
                    3322     CD3 (T Cells)  (continued)
                                24M to 5Y     : 1400-3700                ; 1400-3700
                                6Y to 11Y     : 1200-2600                ; 1200-2600
                                12Y to 17Y    : 1000-2200                ; 1000-2200
                                18Y to 55Y    : 677-2383                 ; 677-2383
                                56Y to 150Y   : 617-2254                 ; 617-2254
                             -  -  -  -  -
                    3324     CD19 (B Cells)
                                Units: cells/mcL
                                   NO SEX
                                No age        :                          ; #N3324
                                1D to 2M      : 300-2000                 ; 300-2000
                                3M to 5M      : 430-3000                 ; 430-3000
                                6M to 11M     : 610-2600                 ; 610-2600
                                12M to 23M    : 720-2600                 ; 720-2600
                                24M to 5Y     : 390-1400                 ; 390-1400
                                6Y to 11Y     : 270-860                  ; 270-860
                                12Y to 17Y    : 110-570                  ; 110-570
                                18Y to 55Y    : 99-527                   ; 99-527
                                56Y to 150Y   : 31-409                   ; 31-409
                                   MALE
                                No age        :                          ; #N3324
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                                 1D to 2M      : 300-2000                  ; 300-2000
                                 3M to 5M      : 430-3000                  ; 430-3000
                                 6M to 11M     : 610-2600                  ; 610-2600
                                 12M to 23M    : 720-2600                  ; 720-2600
                                 24M to 5Y     : 390-1400                  ; 390-1400
                                 6Y to 11Y     : 270-860                   ; 270-860
                                 12Y to 17Y    : 110-570                   ; 110-570
                                 18Y to 55Y    : 99-527                    ; 99-527
                                 56Y to 150Y   : 31-409                    ; 31-409
                                    FEMALE
                                 No age        :                           ; #N3324
                                 1D to 2M      : 300-2000                  ; 300-2000
                                 3M to 5M      : 430-3000                  ; 430-3000
                                 6M to 11M     : 610-2600                  ; 610-2600
                                 12M to 23M    : 720-2600                  ; 720-2600
                                 24M to 5Y     : 390-1400                  ; 390-1400
                                 6Y to 11Y     : 270-860                   ; 270-860
                                 12Y to 17Y    : 110-570                   ; 110-570
                                 18Y to 55Y    : 99-527                    ; 99-527
                                 56Y to 150Y   : 31-409                    ; 31-409
                              -  -  -  -  -
                        4055     CD16+CD56 (NK cells)
                                 Units: cells/mcL
                                    NO SEX
                                 No age        :                           ; #N4055
                                 1D to 2M      : 170-1100                  ; 170-1100
                                 3M to 5M      : 170-830                   ; 170-830
                                 6M to 11M     : 160-950                   ; 160-950


MML                                   MML Test setup information
  ORDER      EFF                                                                                  Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
                        4055     CD16+CD56 (NK cells)  (continued)
                                 12M to 23M    : 180-920                   ; 180-920
                                 24M to 5Y     : 130-720                   ; 130-720
                                 6Y to 11Y     : 100-480                   ; 100-480
                                 12Y to 17Y    : 70-480                    ; 70-480
                                 18Y to 55Y    : 101-678                   ; 101-678
                                 56Y to 150Y   : 110-657                   ; 110-657
                                    MALE
                                 No age        :                           ; #N4055
                                 1D to 2M      : 170-1100                  ; 170-1100
                                 3M to 5M      : 170-830                   ; 170-830
                                 6M to 11M     : 160-950                   ; 160-950
                                 12M to 23M    : 180-920                   ; 180-920
                                 24M to 5Y     : 130-720                   ; 130-720
                                 6Y to 11Y     : 100-480                   ; 100-480
                                 12Y to 17Y    : 70-480                    ; 70-480
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                                 18Y to 55Y    : 101-678                  ; 101-678
                                 56Y to 150Y   : 110-657                  ; 110-657
                                    FEMALE
                                 No age        :                          ; #N4055
                                 1D to 2M      : 170-1100                 ; 170-1100
                                 3M to 5M      : 170-830                  ; 170-830
                                 6M to 11M     : 160-950                  ; 160-950
                                 12M to 23M    : 180-920                  ; 180-920
                                 24M to 5Y     : 130-720                  ; 130-720
                                 6Y to 11Y     : 100-480                  ; 100-480
                                 12Y to 17Y    : 70-480                   ; 70-480
                                 18Y to 55Y    : 101-678                  ; 101-678
                                 56Y to 150Y   : 110-657                  ; 110-657
                           -  -  -  -  -
                       3325     CD4 (Helper Cells)
                                 Units: cells/mcL
                                    NO SEX
                                 No age        :                          ; #N3325
                                 1D to 2M      : 1600-4000                ; 1600-4000
                                 3M to 5M      : 1800-4000                ; 1800-4000
                                 6M to 11M     : 1400-4300                ; 1400-4300
                                 12M to 23M    : 1300-3400                ; 1300-3400
                                 24M to 5Y     : 700-2200                 ; 700-2200
                                 6Y to 11Y     : 650-1500                 ; 650-1500
                                 12Y to 17Y    : 530-1300                 ; 530-1300
                                 18Y to 55Y    : 424-1509                 ; 424-1509
                                 56Y to 150Y   : 430-1513                 ; 430-1513
                                    MALE
                                 No age        :                          ; #N3325
                                 1D to 2M      : 1600-4000                ; 1600-4000
                                 3M to 5M      : 1800-4000                ; 1800-4000
                                 6M to 11M     : 1400-4300                ; 1400-4300
                                 12M to 23M    : 1300-3400                ; 1300-3400
                                 24M to 5Y     : 700-2200                 ; 700-2200


MML                                   MML Test setup information
  ORDER      EFF                                                                          Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
                       3325     CD4 (Helper Cells)  (continued)
                                 6Y to 11Y     : 650-1500                 ; 650-1500
                                 12Y to 17Y    : 530-1300                 ; 530-1300
                                 18Y to 55Y    : 424-1509                 ; 424-1509
                                 56Y to 150Y   : 430-1513                 ; 430-1513
                                    FEMALE
                                 No age        :                          ; #N3325
                                 1D to 2M      : 1600-4000                ; 1600-4000
                                 3M to 5M      : 1800-4000                ; 1800-4000
                                 6M to 11M     : 1400-4300                ; 1400-4300
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            12M to 23M    : 1300-3400                ; 1300-3400
            24M to 5Y     : 700-2200                 ; 700-2200
            6Y to 11Y     : 650-1500                 ; 650-1500
            12Y to 17Y    : 530-1300                 ; 530-1300
            18Y to 55Y    : 424-1509                 ; 424-1509
            56Y to 150Y   : 430-1513                 ; 430-1513
        -  -  -  -  -
3326     CD8 (Supp'r Cells)
            Units: cells/mcL
               NO SEX
            No age        :                          ; #N3326
            1D to 2M      : 560-1700                 ; 560-1700
            3M to 5M      : 590-1600                 ; 590-1600
            6M to 11M     : 500-1700                 ; 500-1700
            12M to 23M    : 620-2000                 ; 620-2000
            24M to 5Y     : 490-1300                 ; 490-1300
            6Y to 11Y     : 370-1100                 ; 370-1100
            12Y to 17Y    : 330-920                  ; 330-920
            18Y to 55Y    : 169-955                  ; 169-955
            56Y to 150Y   : 101-839                  ; 101-839
               MALE
            No age        :                          ; #N3326
            1D to 2M      : 560-1700                 ; 560-1700
            3M to 5M      : 590-1600                 ; 590-1600
            6M to 11M     : 500-1700                 ; 500-1700
            12M to 23M    : 620-2000                 ; 620-2000
            24M to 5Y     : 490-1300                 ; 490-1300
            6Y to 11Y     : 370-1100                 ; 370-1100
            12Y to 17Y    : 330-920                  ; 330-920
            18Y to 55Y    : 169-955                  ; 169-955
            56Y to 150Y   : 101-839                  ; 101-839
               FEMALE
            No age        :                          ; #N3326
            1D to 2M      : 560-1700                 ; 560-1700
            3M to 5M      : 590-1600                 ; 590-1600
            6M to 11M     : 500-1700                 ; 500-1700
            12M to 23M    : 620-2000                 ; 620-2000
            24M to 5Y     : 490-1300                 ; 490-1300
            6Y to 11Y     : 370-1100                 ; 370-1100
            12Y to 17Y    : 330-920                  ; 330-920
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  ORDER      EFF                                                                    Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
                    3326     CD8 (Supp'r Cells)  (continued)
                                18Y to 55Y    : 169-955                 ; 169-955
                                56Y to 150Y   : 101-839                 ; 101-839
                          -  -  -  -  -
                    3327     H/S Ratio
                                   NO SEX
                                All Ages : 1.0-                         ; >=1.0
                                   MALE
                                All Ages : 1.0-                         ; >=1.0
                                   FEMALE
                                All Ages : 1.0-                         ; >=1.0
                          -  -  -  -  -
                    6657     Comment
                          -  -  -  -  -
   87994     2/23/2011     Immune Assessment B Cell Subsets, B                                  MCR
                    Transport temp : Refrig <48 hours\Ambient <48 hours OK\Frozen NO
                    30296    CD19+ % of total Lymphocytes
                                Units: %
                                   NO SEX
                                No age        :                         ; #N30296NA
                                1D to 18Y     : 4.3-23.2                ; 4.3-23.2
                                19Y to 150Y   : 2.8-17.4                ; 2.8-17.4
                                   MALE
                                No age        :                         ; #N30296NA
                                1D to 18Y     : 4.3-23.2                ; 4.3-23.2
                                19Y to 150Y   : 2.8-17.4                ; 2.8-17.4
                                   FEMALE
                                No age        :                         ; #N30296NA
                                1D to 18Y     : 4.3-23.2                ; 4.3-23.2
                                19Y to 150Y   : 2.8-17.4                ; 2.8-17.4
                              TEST CODE ALWAYS MESSAGE - [30296U]
                              30296U   This assay is performed using peripheral blood mononuclear cells
                                       (PBMC) isolated from whole blood.  CD19 percentage and absolute
                                       results should not be directly compared to the CD19 results from the T
                                       & B cell Surface Markers AG assay using whole blood, because cells are
                                       lost during the PBMC isolation process.
                          -  -  -  -  -
                    29094    CD20+ % of total Lymphocytes
                                Units: %
                                   NO SEX
                                No age        :                         ; #N29094
                                1D to 18Y     : 4.2-24.1                ; 4.2-24.1
                                19Y to 150Y   : 3.2-16.8                ; 3.2-16.8
                                   MALE
                                No age        :                         ; #N29094
                                1D to 18Y     : 4.2-24.1                ; 4.2-24.1
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                              19Y to 150Y   : 3.2-16.8                 ; 3.2-16.8
                                 FEMALE
                              No age        :                          ; #N29094
                              1D to 18Y     : 4.2-24.1                 ; 4.2-24.1


MML                                 MML Test setup information
  ORDER      EFF                                                                          Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
                    29094    CD20+ % of total Lymphocytes  (continued)
                              19Y to 150Y   : 3.2-16.8                 ; 3.2-16.8
                         -  -  -  -  -
                    30298    CD27+ % of CD19+ B cells
                              Units: %
                                 NO SEX
                              No age        :                          ; #N30298NA
                              1D to 18Y     : 4.6-49.1                 ; 4.6-49.1
                              19Y to 150Y   : 6.3-52.8                 ; 6.3-52.8
                                 MALE
                              No age        :                          ; #N30298NA
                              1D to 18Y     : 4.6-49.1                 ; 4.6-49.1
                              19Y to 150Y   : 6.3-52.8                 ; 6.3-52.8
                                 FEMALE
                              No age        :                          ; #N30298NA
                              1D to 18Y     : 4.6-49.1                 ; 4.6-49.1
                              19Y to 150Y   : 6.3-52.8                 ; 6.3-52.8
                         -  -  -  -  -
                    30300    CD27+ IgM+ IgD+ % of CD19+ B cells
                              Units: %
                                 NO SEX
                              No age        :                          ; #N30300NA
                              1D to 18Y     : 0.2-12.0                 ; 0.2-12.0
                              19Y to 150Y   : 1.7-29.3                 ; 1.7-29.3
                                 MALE
                              No age        :                          ; #N30300NA
                              1D to 18Y     : 0.2-12.0                 ; 0.2-12.0
                              19Y to 150Y   : 1.7-29.3                 ; 1.7-29.3
                                 FEMALE
                              No age        :                          ; #N30300NA
                              1D to 18Y     : 0.2-12.0                 ; 0.2-12.0
                              19Y to 150Y   : 1.7-29.3                 ; 1.7-29.3
                         -  -  -  -  -
                    30302    CD27+ IgM- IgD- % of CD19+ B cells
                              Units: %
                                 NO SEX
                              No age        :                          ; #N30302NA
                              1D to 18Y     : 1.9-30.4                 ; 1.9-30.4
                              19Y to 150Y   : 2.3-26.5                 ; 2.3-26.5
                                 MALE
```

```
                    No age        :                          ; #N30302NA
                    1D to 18Y     : 1.9-30.4                 ; 1.9-30.4
                    19Y to 150Y   : 2.3-26.5                 ; 2.3-26.5
                       FEMALE
                    No age        :                          ; #N30302NA
                    1D to 18Y     : 1.9-30.4                 ; 1.9-30.4
                    19Y to 150Y   : 2.3-26.5                 ; 2.3-26.5
                 -  -  -  -  -
          30304    CD27+ IgM+ IgD- % of CD19+ B cells
                    Units: %


MML                                 MML Test setup information
  ORDER      EFF                                                                    Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
          30304    CD27+ IgM+ IgD- % of CD19+ B cells  (continued)
                       NO SEX
                    No age        :                          ; #N30304NA
                    1D to 18Y     : 0.3-13.1                 ; 0.3-13.1
                    19Y to 150Y   : 0.0-5.3                  ; 0.0-5.3
                       MALE
                    No age        :                          ; #N30304NA
                    1D to 18Y     : 0.3-13.1                 ; 0.3-13.1
                    19Y to 150Y   : 0.0-5.3                  ; 0.0-5.3
                       FEMALE
                    No age        :                          ; #N30304NA
                    1D to 18Y     : 0.3-13.1                 ; 0.3-13.1
                    19Y to 150Y   : 0.0-5.3                  ; 0.0-5.3
                 -  -  -  -  -
          30306    IgM+ % of CD19+ B cells
                    Units: %
                       NO SEX
                    No age        :                          ; #N30306NA
                    1D to 18Y     : 32.8-82.6                ; 32.8-82.6
                    19Y to 150Y   : 26.0-78.0                ; 26.0-78.0
                       MALE
                    No age        :                          ; #N30306NA
                    1D to 18Y     : 32.8-82.6                ; 32.8-82.6
                    19Y to 150Y   : 26.0-78.0                ; 26.0-78.0
                       FEMALE
                    No age        :                          ; #N30306NA
                    1D to 18Y     : 32.8-82.6                ; 32.8-82.6
                    19Y to 150Y   : 26.0-78.0                ; 26.0-78.0
                 -  -  -  -  -
          30308    CD38+ IgM- % of CD19+ B cells
                    Units: %
                       NO SEX
                    No age        :                          ; #N30308NA
                    1D to 18Y     : 2.9-51.8                 ; 2.9-51.8
```

```
                              19Y to 150Y   : 4.1-42.2                 ; 4.1-42.2
                                 MALE
                              No age        :                          ; #N30308NA
                              1D to 18Y     : 2.9-51.8                 ; 2.9-51.8
                              19Y to 150Y   : 4.1-42.2                 ; 4.1-42.2
                                 FEMALE
                              No age        :                          ; #N30308NA
                              1D to 18Y     : 2.9-51.8                 ; 2.9-51.8
                              19Y to 150Y   : 4.1-42.2                 ; 4.1-42.2
                           -  -  -  -  -
                     30310    CD38+ IgM+ % of CD19+ B cells
                              Units: %
                                 NO SEX
                              No age        :                          ; #N30310NA
                              1D to 18Y     : 7.6-48.6                 ; 7.6-48.6
                              19Y to 150Y   : 1.2-50.7                 ; 1.2-50.7


MML                                 MML Test setup information
  ORDER      EFF                                                                          Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
                     30310    CD38+ IgM+ % of CD19+ B cells  (continued)
                                 MALE
                              No age        :                          ; #N30310NA
                              1D to 18Y     : 7.6-48.6                 ; 7.6-48.6
                              19Y to 150Y   : 1.2-50.7                 ; 1.2-50.7
                                 FEMALE
                              No age        :                          ; #N30310NA
                              1D to 18Y     : 7.6-48.6                 ; 7.6-48.6
                              19Y to 150Y   : 1.2-50.7                 ; 1.2-50.7
                           -  -  -  -  -
                     30312    CD21+ % of CD19+ B cells
                              Units: %
                                 NO SEX
                              No age        :                          ; #N30312NA
                              1D to 18Y     : 94.5-99.8                ; 94.5-99.8
                              19Y to 150Y   : 92.1-99.6                ; 92.1-99.6
                                 MALE
                              No age        :                          ; #N30312NA
                              1D to 18Y     : 94.5-99.8                ; 94.5-99.8
                              19Y to 150Y   : 92.1-99.6                ; 92.1-99.6
                                 FEMALE
                              No age        :                          ; #N30312NA
                              1D to 18Y     : 94.5-99.8                ; 94.5-99.8
                              19Y to 150Y   : 92.1-99.6                ; 92.1-99.6
                           -  -  -  -  -
                     30314    CD21- % of CD19+ B cells
                              Units: %
                                 NO SEX
```

```
                    No age        :                          ; #N30314NA
                    1D to 18Y     : 0.2-5.5                  ; 0.2-5.5
                    19Y to 150Y   : 0.2-8.6                  ; 0.2-8.6
                       MALE
                    No age        :                          ; #N30314NA
                    1D to 18Y     : 0.2-5.5                  ; 0.2-5.5
                    19Y to 150Y   : 0.2-8.6                  ; 0.2-8.6
                       FEMALE
                    No age        :                          ; #N30314NA
                    1D to 18Y     : 0.2-5.5                  ; 0.2-5.5
                    19Y to 150Y   : 0.2-8.6                  ; 0.2-8.6
                 -  -  -  -  -
          30297    CD19+
                    Units: cells/mcL
                       NO SEX
                    No age        :                          ; #N30297
                    1D to 18Y     : 92.0-792.0               ; 92.0-792.0
                    19Y to 150Y   : 90.0-539.0               ; 90.0-539.0
                       MALE
                    No age        :                          ; #N30297
                    1D to 18Y     : 92.0-792.0               ; 92.0-792.0
                    19Y to 150Y   : 90.0-539.0               ; 90.0-539.0


MML                                 MML Test setup information
  ORDER      EFF                                                                    Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
          30297    CD19+  (continued)
                       FEMALE
                    No age        :                          ; #N30297
                    1D to 18Y     : 92.0-792.0               ; 92.0-792.0
                    19Y to 150Y   : 90.0-539.0               ; 90.0-539.0
                 -  -  -  -  -
          29095    CD20+
                    Units: cells/mcL
                       NO SEX
                    No age        :                          ; #N29095
                    1D to 18Y     : 85.0-767.9               ; 85.0-767.9
                    19Y to 150Y   : 95.0-580.8               ; 95.0-580.8
                       MALE
                    No age        :                          ; #N29095
                    1D to 18Y     : 85.0-767.9               ; 85.0-767.9
                    19Y to 150Y   : 95.0-580.8               ; 95.0-580.8
                       FEMALE
                    No age        :                          ; #N29095
                    1D to 18Y     : 85.0-767.9               ; 85.0-767.9
                    19Y to 150Y   : 95.0-580.8               ; 95.0-580.8
                 -  -  -  -  -
          30299    CD27+
```

```
                    Units: cells/mcL
                       NO SEX
                    No age        :                          ; #N30299
                    1D to 18Y     : 9.4-136.0                ; 9.4-136.0
                    19Y to 150Y   : 18.0-145.0               ; 18.0-145.0
                       MALE
                    No age        :                          ; #N30299
                    1D to 18Y     : 9.4-136.0                ; 9.4-136.0
                    19Y to 150Y   : 18.0-145.0               ; 18.0-145.0
                       FEMALE
                    No age        :                          ; #N30299
                    1D to 18Y     : 9.4-136.0                ; 9.4-136.0
                    19Y to 150Y   : 18.0-145.0               ; 18.0-145.0
                 -  -  -  -  -
          30301    CD27+ IgM+ IgD+
                    Units: cells/mcL
                       NO SEX
                    No age        :                          ; #N30301
                    1D to 18Y     : 0.8-42.7                 ; 0.8-42.7
                    19Y to 150Y   : 4.0-85.0                 ; 4.0-85.0
                       MALE
                    No age        :                          ; #N30301
                    1D to 18Y     : 0.8-42.7                 ; 0.8-42.7
                    19Y to 150Y   : 4.0-85.0                 ; 4.0-85.0
                       FEMALE
                    No age        :                          ; #N30301
                    1D to 18Y     : 0.8-42.7                 ; 0.8-42.7
                    19Y to 150Y   : 4.0-85.0                 ; 4.0-85.0
                 -  -  -  -  -


MML                                MML Test setup information
  ORDER      EFF                                                                    Perform
  CODE       DATE   TC     TITLE          Checking Normals             Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------             -----------------------  -------
89220  (continued)
          30303    CD27+ IgM- IgD-
                    Units: cells/mcL
                       NO SEX
                    No age        :                          ; #N30303
                    1D to 18Y     : 5.2-74.2                 ; 5.2-74.2
                    19Y to 150Y   : 7.0-61.0                 ; 7.0-61.0
                       MALE
                    No age        :                          ; #N30303
                    1D to 18Y     : 5.2-74.2                 ; 5.2-74.2
                    19Y to 150Y   : 7.0-61.0                 ; 7.0-61.0
                       FEMALE
                    No age        :                          ; #N30303
                    1D to 18Y     : 5.2-74.2                 ; 5.2-74.2
                    19Y to 150Y   : 7.0-61.0                 ; 7.0-61.0
                 -  -  -  -  -
```

```
                    30305    CD27+ IgM+ IgD-
                                Units: cells/mcL
                                   NO SEX
                                No age        :                          ; #N30305
                                1D to 18Y     : 0.8-37.8                 ; 0.8-37.8
                                19Y to 150Y   : 0.0-12.0                 ; 0.0-12.0
                                   MALE
                                No age        :                          ; #N30305
                                1D to 18Y     : 0.8-37.8                 ; 0.8-37.8
                                19Y to 150Y   : 0.0-12.0                 ; 0.0-12.0
                                   FEMALE
                                No age        :                          ; #N30305
                                1D to 18Y     : 0.8-37.8                 ; 0.8-37.8
                                19Y to 150Y   : 0.0-12.0                 ; 0.0-12.0
                             -  -  -  -  -
                    30307    IgM+
                                Units: cells/mcL
                                   NO SEX
                                No age        :                          ; #N30307
                                1D to 18Y     : 46.0-596.0               ; 46.0-596.0
                                19Y to 150Y   : 37.0-327.0               ; 37.0-327.0
                                   MALE
                                No age        :                          ; #N30307
                                1D to 18Y     : 46.0-596.0               ; 46.0-596.0
                                19Y to 150Y   : 37.0-327.0               ; 37.0-327.0
                                   FEMALE
                                No age        :                          ; #N30307
                                1D to 18Y     : 46.0-596.0               ; 46.0-596.0
                                19Y to 150Y   : 37.0-327.0               ; 37.0-327.0
                             -  -  -  -  -
                    30309    CD38+ IgM-
                                Units: cells/mcL
                                   NO SEX
                                No age        :                          ; #N30309
                                1D to 18Y     : 8.2-275.1                ; 8.2-275.1


MML                                 MML Test setup information
  ORDER      EFF                                                                    Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
                    30309    CD38+ IgM-  (continued)
                                19Y to 150Y   : 7.0-153.0                ; 7.0-153.0
                                   MALE
                                No age        :                          ; #N30309
                                1D to 18Y     : 8.2-275.1                ; 8.2-275.1
                                19Y to 150Y   : 7.0-153.0                ; 7.0-153.0
                                   FEMALE
                                No age        :                          ; #N30309
                                1D to 18Y     : 8.2-275.1                ; 8.2-275.1
```

```
            19Y to 150Y   : 7.0-153.0                ; 7.0-153.0
        -  -  -  -  -
30311    CD38+ IgM+
            Units: cells/mcL
               NO SEX
            No age        :                           ; #N30311
            1D to 18Y     : 14.2-229.6                ; 14.2-229.6
            19Y to 150Y   : 2.0-139.4                 ; 2.0-139.4
               MALE
            No age        :                           ; #N30311
            1D to 18Y     : 14.2-229.6                ; 14.2-229.6
            19Y to 150Y   : 2.0-139.4                 ; 2.0-139.4
               FEMALE
            No age        :                           ; #N30311
            1D to 18Y     : 14.2-229.6                ; 14.2-229.6
            19Y to 150Y   : 2.0-139.4                 ; 2.0-139.4
        -  -  -  -  -
30313    CD21+
            Units: cells/mcL
               NO SEX
            No age        :                           ; #N30313
            1D to 18Y     : 89.4-780.1                ; 89.4-780.1
            19Y to 150Y   : 85.0-533.0                ; 85.0-533.0
               MALE
            No age        :                           ; #N30313
            1D to 18Y     : 89.4-780.1                ; 89.4-780.1
            19Y to 150Y   : 85.0-533.0                ; 85.0-533.0
               FEMALE
            No age        :                           ; #N30313
            1D to 18Y     : 89.4-780.1                ; 89.4-780.1
            19Y to 150Y   : 85.0-533.0                ; 85.0-533.0
        -  -  -  -  -
30315    CD21-
            Units: cells/mcL
               NO SEX
            No age        :                           ; #N30315
            1D to 18Y     : 0.9-25.5                  ; 0.9-25.5
            19Y to 150Y   : 0.3-22.0                  ; 0.3-22.0
               MALE
            No age        :                           ; #N30315
            1D to 18Y     : 0.9-25.5                  ; 0.9-25.5
```

```
  ORDER      EFF                                                                    Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------  -------
89220  (continued)
                    30315    CD21-  (continued)
                                19Y to 150Y   : 0.3-22.0                ; 0.3-22.0
                                   FEMALE
                                No age        :                         ; #N30315
                                1D to 18Y     : 0.9-25.5                ; 0.9-25.5
                                19Y to 150Y   : 0.3-22.0                ; 0.3-22.0
                           -  -  -  -  -
                    30316    Interpretation
                             TEST CODE ALWAYS MESSAGE - [ZASR]
                             ZASR     Analyte Specific Reagent
                                      This test was developed and its performance characteristics
                                      determined by Laboratory Medicine and Pathology, Mayo
                                      Clinic. It has not been cleared or
                                      approved by the U.S. Food and Drug Administration.
                           -  -  -  -  -
   89009     10/8/2007     CD40 by Flow, QL, B                                          MCR
                    Transport temp : Ambient\Refrig <96 hours OK\Frozen NO
                    89009    CD40 by Flow, QL
                             TEST CODE ALWAYS MESSAGE - [ZASR]
                             ZASR     Analyte Specific Reagent
                                      This test was developed and its performance characteristics
                                      determined by Laboratory Medicine and Pathology, Mayo
                                      Clinic. It has not been cleared or
                                      approved by the U.S. Food and Drug Administration.
                           -  -  -  -  -
   82964     4/25/2008     X-Linked Hyper IgM Syndrome, B                               MCR
                    Transport temp : Refrig\Ambient OK\Frozen NO
                    82964    CD40 Ligand Expression
                                   NO SEX
                                All Ages :                              ; Present
                                   MALE
                                All Ages :                              ; Present
                                   FEMALE
                                All Ages :                              ; Present
                             TEST CODE ALWAYS MESSAGE - [ZASR]
                             ZASR     Analyte Specific Reagent
                                      This test was developed and its performance characteristics
                                      determined by Laboratory Medicine and Pathology, Mayo
                                      Clinic. It has not been cleared or
                                      approved by the U.S. Food and Drug Administration.
                           -  -  -  -  -
                    29040    CD40muIg (Function)
                                   NO SEX
                                All Ages :                              ; Present
                                   MALE
                                All Ages :                              ; Present
```

```
                                 FEMALE
                              All Ages :                              ; Present
                         -  -  -  -  -
                   23901    Interpretation


MML                                 MML Test setup information
  ORDER      EFF                                                                          Perform
  CODE       DATE   TC     TITLE          Checking Normals              Print normals (# coded)  Site *
 ------      ----   ----   ----------     ----------------              -----------------------   -------
89220  (continued)
                   23901    Interpretation  (continued)
                                 NO SEX
                              All Ages :                              ; #N23901
                                 MALE
                              All Ages :                              ; #N23901
                                 FEMALE
                              All Ages :                              ; #N23901
                            TEST CODE ALWAYS MESSAGE - [ZASR]
                            ZASR     Analyte Specific Reagent
                                     This test was developed and its performance characteristics
                                     determined by Laboratory Medicine and Pathology, Mayo
                                     Clinic. It has not been cleared or
                                     approved by the U.S. Food and Drug Administration.
                         -  -  -  -  -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - -

*Performing Site Legend
==================================================================================================================
MCR     Mayo Clinic Dpt of Lab Med & Pathology              LAB DIRECTOR:   Franklin R. Cockerill, III, M.D.
        200 First Street SW
        Rochester, MN  55905
==================================================================================================================

MML                                                   Messages used as normals
CODE         TEXT
-----        ------------------
N23901       Not consistent with Hyper IgM Syndrome
--------
N29094       4.2-24.1 (<=18 y)
             3.2-16.8 (>18 y)
--------
N29095       85.0-767.9 (<=18 y)
             95.0-580.8 (>18 y)
--------
N30296NA     4.3-23.2 (<=18 y)
             2.8-17.4 (>18 y)
--------
N30297       92.0-792.0 (<=18 y)
             90.0-539.0 (>18 y)
--------
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```
N30298NA     4.6-49.1 (<=18 y)
             6.3-52.8 (>18 y)
--------
N30299       9.4-136.0 (<=18 y)
             18.0-145.0 (>18 y)
--------
N30300NA     0.2-12.0 (<=18 y)
             1.7-29.3 (>18 y)
--------
N30301       0.8-42.7 (<=18 y)
             4.0-85.0 (>18 y)
--------
N30302NA     1.9-30.4 (<=18 y)
             2.3-26.5 (>18 y)
--------
N30303       5.2-74.2 (<=18 y)
             7.0-61.0 (>18 y)
--------
N30304NA     0.3-13.1 (<=18 y)
             0.0-5.3 (>18 y)
--------
N30305       0.8-37.8 (<=18 y)
             0.0-12.0 (>18 y)
--------
N30306NA     32.8-82.6 (<=18 y)
             26.0-78.0 (>18 y)
--------
N30307       46.0-596.0 (<=18 y)
             37.0-327.0 (>18 y)
--------
N30308NA     2.9-51.8 (<=18 y)
             4.1-42.2 (>18 y)
--------
N30309       8.2-275.1 (<=18 y)
             7.0-153.0 (>18 y)
--------
N30310NA     7.6-48.6 (<=18 y)
             1.2-50.7 (>18 y)
--------
N30311       14.2-229.6 (<=18 y)
             2.0-139.4 (>18 y)
--------
N30312NA     94.5-99.8 (<=18 y)
             92.1-99.6 (>18 y)
--------
N30313       89.4-780.1 (<=18 y)
             85.0-533.0 (>18 y)
--------
N30314NA     0.2-5.5 (<=18 y)
             0.2-8.6 (>18 y)
--------
```

```
N30315       0.9-25.5 (<=18 y)
             0.3-22.0 (>18 y)
--------
N3316        53-84 (0-2 mo)
             51-77 (3-5 mo)
             49-76 (6-11 mo)
             53-75 (12-23 mo)
             56-75 (2-5 y)
             60-76 (6-11 y)
             56-84 (12-17 y)
             59-83 (18-55 y)
             49-87 (>55 y)
--------
N3318        6-32 (0-2 mo)
             11-41 (3-5 mo)
             14-37 (6-11 mo)
             16-35 (12-23 mo)
             14-33 (2-5 y)
             13-27 (6-11 y)
             6-23 (12-17 y)
             6-22 (18-55 y)
             3-20 (>55 y)
--------
N3319        35-64 (0-2 mo)
             35-56 (3-5 mo)
             31-56 (6-11 mo)
             32-51 (12-23 mo)
             28-47 (2-5 y)
             31-47 (6-11 y)
             31-52 (12-17 y)
             31-59 (18-55 y)
             32-67 (>55 y)
--------
N3320        12-28 (0-2 mo)
             12-23 (3-5 mo)
             12-24 (6-11 mo)
             14-30 (12-23 mo)
             16-30 (2-5 y)
             18-35 (6-17 y)
             12-38 (18-55 y)
             8-40 (>55 y)
--------
N3322        2500-5500 (0-2 mo)
             2500-5600 (3-5 mo)
             1900-5900 (6-11 mo)
             2100-6200 (12-23 mo)
             1400-3700 (2-5 y)
             1200-2600 (6-11 y)
             1000-2200 (12-17 y)
             677-2383 (18-55 y)
             617-2254 (>55 y)
```

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--------
N3324        300-2000 (0-2 mo)
             430-3000 (3-5 mo)
             610-2600 (6-11 mo)
             720-2600 (12-23 mo)
             390-1400 (2-5 y)
             270-860 (6-11 y)
             110-570 (12-17 y)
             99-527 (18-55 y)
             31-409 (>55 y)
--------
N3325        1600-4000 (0-2 mo)
             1800-4000 (3-5 mo)
             1400-4300 (6-11 mo)
             1300-3400 (12-23 mo)
             700-2200 (2-5 y)
             650-1500 (6-11 y)
             530-1300 (12-17 y)
             424-1509 (18-55 y)
             430-1513 (>55 y)
--------
N3326        560-1700 (0-2 mo)
             590-1600 (3-5 mo)
             500-1700 (6-11 mo)
             620-2000 (12-23 mo)
             490-1300 (2-5 y)
             370-1100 (6-11 y)
             330-920 (12-17 y)
             169-955 (18-55 y)
             101-839 (>55 y)
--------
N4054        4-18 (0-2 mo)
             3-14 (3-5 mo)
             3-15 (6-23 mo)
             4-17 (2-11 y)
             3-22 (12-17 y)
             6-27 (18-55 y)
             6-35 (>55 y)
--------
N4055        170-1100 (0-2 mo)
             170-830 (3-5 mo)
             160-950 (6-11 mo)
             180-920 (12-23 mo)
             130-720 (2-5 y)
             100-480 (6-11 y)
             70-480 (12-17 y)
             101-678 (18-55 y)
             110-657 (>55 y)
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```

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NN3321       0.66-4.60 (0-17 y)
             0.99-3.15 (18-55 y)
             1.00-3.33 (>55 y)
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Total of 34 normals codes

    *** End of Report ***
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