

**Table 1. SPIROMICS II Biospecimen Inventory Status for All Stratum**

Based on BSP data March 7, 2023

| Material                  | Material Type | Material Description  | N*   | Visit 5          |                  | In   |            |
|---------------------------|---------------|---|------|------------------|------------------|------|------------|
|                           |               |   |      | QTY <sup>†</sup> | VOL <sup>‡</sup> | V1V5 | V1V2V4V5** |
| Blood                     | BL            | Blood in Paxgene RNA tube containing anticoagulant and RNA stabilizers  | 1151 | 1                | 2500             | 0    | 0          |
| Buccal Swab               | BUC           | Buccal swab (elective procedure)  | 70   | 1                | --               | --   | --         |
| DNA                       | DN            | DNA extracted from blood lysate (prepared at the sites)   | 1238 | 4                | 243              | 919  | 0          |
| Exhaled Breath Condensate | EBC           | Exhaled breath condensate (elective procedure)  | 201  | 2                | 500              | --   | --         |
| Hair Follicle             | HAIRF         | Hair follicle from face (elective procedure)  | 8    | 2                | --               | --   | --         |
| Hair Follicle             | HAIRH         | Hair follicle from scalp (elective procedure)   | 49   | 1                | --               | --   | --         |
| Plasma                    | PL100         | Plasma in P100 tube with a mechanical separator and sprayed on K2EDTA anti-coagulant, and protein stabilizers | 1236 | 13               | 150              | 1186 | 452        |
| Plasma                    | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant   | 1293 | 27               | 150              | 1287 | 509        |
| Plasma                    | PLYT          | Plasma in yellow top tube with 1.5ml of ACD anticoagulant   | 1292 | 14               | 150              | 1284 | 503        |
| Serum                     | SE            | Serum in red top tube with clot activator and no anticoagulant  | 1309 | 28               | 150              | 1305 | 517        |
| Sputolysin                | SLSUP         | Sputolysin/DPBS samples - See MOP5 7.1.5.7  | 544  | 2                | 6500             | --   | --         |
| Sputum                    | CYT           | Sputum aliquots for cytokine analysis - See MOP5 7.1.5.4a   | 685  | 4                | 500              | 454  | 0          |
| Sputum                    | CYTZ          | Sputum aliquots for cytokine analysis mixed with Zymo Shield - See MOP5 7.1.5.4a                              | 699  | 1                | 600              | --   | --         |
| Sputum                    | MICZ          | Sputum for microbiology analysis with Zymo Shield- See MOP5 7.1.3   | 577  | 2                | 200              | --   | --         |
| Sputum                    | NUC           | Sputum aliquots for nucleotide analysis - See MOP5 7.1.5.4a   | 717  | 4                | 688              | 481  | 0          |
| Sputum                    | OSMO          | Sputum for osmotic pressure analysis - See MOP5 7.1.4   | 567  | 1                | --               | 0    | 0          |
| Sputum Cell Pellet        | PEL           | Cell pellet in DPBS and Zymo shield - See MOP5 7.1.8  | 565  | 2                | 500              | --   | --         |
| Urine                     | UR            | Urine from specimen cup   | 1309 | 10               | 1000             | 1292 | 500        |
| Urine (Preserved)         | PUR           | Urine with ascorbic acid preservative   | 1286 | 10               | 1000             | 1266 | 486        |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 1A. SPIROMICS II Biospecimen Inventory Status for Stratum Enrolled 1**

Based on BSP data March 7, 2023

| Material                  | Material Type | Material Description  | N*  | Visit 5          |                  | In   |            |
|---------------------------|---------------|---|-----|------------------|------------------|------|------------|
|                           |               |   |     | QTY <sup>†</sup> | VOL <sup>‡</sup> | V1V5 | V1V2V4V5** |
| Blood                     | BL            | Blood in Paxgene RNA tube containing anticoagulant and RNA stabilizers  | 103 | 1                | 8000             | 0    | 0          |
| Buccal Swab               | BUC           | Buccal swab (elective procedure)  | 8   | 1                | --               | --   | --         |
| DNA                       | DN            | DNA extracted from blood lysate (prepared at the sites)   | 94  | 4                | 243              | 65   | 0          |
| Exhaled Breath Condensate | EBC           | Exhaled breath condensate (elective procedure)  | 22  | 2                | 500              | --   | --         |
| Hair Follicle             | HAIRF         | Hair follicle from face (elective procedure)  | 1   | 2                | --               | --   | --         |
| Hair Follicle             | HAIRH         | Hair follicle from scalp (elective procedure)   | 5   | 1                | --               | --   | --         |
| Plasma                    | PL100         | Plasma in P100 tube with a mechanical separator and sprayed on K2EDTA anti-coagulant, and protein stabilizers | 105 | 13               | 150              | 102  | 57         |
| Plasma                    | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant   | 108 | 27               | 150              | 108  | 61         |
| Plasma                    | PLYT          | Plasma in yellow top tube with 1.5ml of ACD anticoagulant   | 108 | 14               | 150              | 108  | 62         |
| Serum                     | SE            | Serum in red top tube with clot activator and no anticoagulant  | 109 | 28               | 150              | 109  | 62         |
| Sputolysin                | SLSUP         | Sputolysin/DPBS samples - See MOP5 7.1.5.7  | 42  | 2                | 8500             | --   | --         |
| Sputum                    | CYT           | Sputum aliquots for cytokine analysis - See MOP5 7.1.5.4a   | 43  | 2                | 300              | 28   | 0          |
| Sputum                    | CYTZ          | Sputum aliquots for cytokine analysis mixed with Zymo Shield - See MOP5 7.1.5.4a                              | 49  | 1                | 1200             | --   | --         |
| Sputum                    | MICZ          | Sputum for microbiology analysis with Zymo Shield- See MOP5 7.1.3   | 43  | 2                | 200              | --   | --         |
| Sputum                    | NUC           | Sputum aliquots for nucleotide analysis - See MOP5 7.1.5.4a   | 49  | 4                | 500              | 31   | 0          |
| Sputum                    | OSMO          | Sputum for osmotic pressure analysis - See MOP5 7.1.4   | 43  | 1                | --               | 0    | 0          |
| Sputum Cell Pellet        | PEL           | Cell pellet in DPBS and Zymo shield - See MOP5 7.1.8  | 37  | 2                | 500              | --   | --         |
| Urine                     | UR            | Urine from specimen cup   | 109 | 10               | 1000             | 108  | 61         |
| Urine (Preserved)         | PUR           | Urine with ascorbic acid preservative   | 108 | 10               | 1000             | 108  | 61         |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 1B. SPIROMICS II Biospecimen Inventory Status for Stratum Enrolled 2**

Based on BSP data March 7, 2023

| Material                  | Material Type | Material Description  | N*  | Visit 5          |                  | In   |            |
|---------------------------|---------------|---|-----|------------------|------------------|------|------------|
|                           |               |   |     | QTY <sup>†</sup> | VOL <sup>‡</sup> | V1V5 | V1V2V4V5** |
| Blood                     | BL            | Blood in Paxgene RNA tube containing anticoagulant and RNA stabilizers  | 383 | 1                | 2500             | 0    | 0          |
| Buccal Swab               | BUC           | Buccal swab (elective procedure)  | 21  | 1                | --               | --   | --         |
| DNA                       | DN            | DNA extracted from blood lysate (prepared at the sites)   | 430 | 4                | 243              | 322  | 0          |
| Exhaled Breath Condensate | EBC           | Exhaled breath condensate (elective procedure)  | 64  | 2                | 500              | --   | --         |
| Hair Follicle             | HAIRF         | Hair follicle from face (elective procedure)  | 2   | 2                | --               | --   | --         |
| Hair Follicle             | HAIRH         | Hair follicle from scalp (elective procedure)   | 15  | 1                | --               | --   | --         |
| Plasma                    | PL100         | Plasma in P100 tube with a mechanical separator and sprayed on K2EDTA anti-coagulant, and protein stabilizers | 419 | 13               | 150              | 406  | 141        |
| Plasma                    | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant   | 445 | 27               | 150              | 443  | 161        |
| Plasma                    | PLYT          | Plasma in yellow top tube with 1.5ml of ACD anticoagulant   | 439 | 14               | 150              | 436  | 156        |
| Serum                     | SE            | Serum in red top tube with clot activator and no anticoagulant  | 452 | 28               | 150              | 449  | 162        |
| Sputolysin                | SLSUP         | Sputolysin/DPBS samples - See MOP5 7.1.5.7  | 196 | 2                | 6050             | --   | --         |
| Sputum                    | CYT           | Sputum aliquots for cytokine analysis - See MOP5 7.1.5.4a   | 256 | 4                | 600              | 165  | 0          |
| Sputum                    | CY TZ         | Sputum aliquots for cytokine analysis mixed with Zymo Shield - See MOP5 7.1.5.4a                              | 259 | 1                | 600              | --   | --         |
| Sputum                    | MICZ          | Sputum for microbiology analysis with Zymo Shield- See MOP5 7.1.3   | 211 | 2                | 202              | --   | --         |
| Sputum                    | NUC           | Sputum aliquots for nucleotide analysis - See MOP5 7.1.5.4a   | 269 | 4                | 750              | 175  | 0          |
| Sputum                    | OSMO          | Sputum for osmotic pressure analysis - See MOP5 7.1.4   | 209 | 1                | --               | 0    | 0          |
| Sputum Cell Pellet        | PEL           | Cell pellet in DPBS and Zymo shield - See MOP5 7.1.8  | 215 | 2                | 500              | --   | --         |
| Urine                     | UR            | Urine from specimen cup   | 454 | 10               | 1000             | 446  | 158        |
| Urine (Preserved)         | PUR           | Urine with ascorbic acid preservative   | 443 | 10               | 1000             | 433  | 154        |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 1C. SPIROMICS II Biospecimen Inventory Status for Stratum Enrolled 3**

Based on BSP data March 7, 2023

| Material                  | Material Type | Material Description  | N*  | Visit 5          |                  |         |               |  |
|---------------------------|---------------|---|-----|------------------|------------------|---------|---------------|--|
|                           |               |   |     | QTY <sup>†</sup> | VOL <sup>‡</sup> | In V1V5 | In V1V2V4V5** |  |
| Blood                     | BL            | Blood in Paxgene RNA tube containing anticoagulant and RNA stabilizers  | 497 | 1                | 2500             | 0       | 0             |  |
| Buccal Swab               | BUC           | Buccal swab (elective procedure)  | 29  | 1                | --               | --      | --            |  |
| DNA                       | DN            | DNA extracted from blood lysate (prepared at the sites)   | 538 | 4                | 243              | 405     | 0             |  |
| Exhaled Breath Condensate | EBC           | Exhaled breath condensate (elective procedure)  | 84  | 2                | 500              | --      | --            |  |
| Hair Follicle             | HAIRF         | Hair follicle from face (elective procedure)  | 5   | 1                | --               | --      | --            |  |
| Hair Follicle             | HAIRH         | Hair follicle from scalp (elective procedure)   | 18  | 1                | --               | --      | --            |  |
| Plasma                    | PL100         | Plasma in P100 tube with a mechanical separator and sprayed on K2EDTA anti-coagulant, and protein stabilizers | 545 | 13               | 150              | 523     | 210           |  |
| Plasma                    | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant   | 559 | 27               | 150              | 556     | 230           |  |
| Plasma                    | PLYT          | Plasma in yellow top tube with 1.5ml of ACD anticoagulant   | 563 | 14               | 150              | 560     | 230           |  |
| Serum                     | SE            | Serum in red top tube with clot activator and no anticoagulant  | 567 | 28               | 150              | 566     | 234           |  |
| Sputolysin                | SLSUP         | Sputolysin/DPBS samples - See MOP5 7.1.5.7  | 267 | 2                | 7000             | --      | --            |  |
| Sputum                    | CYT           | Sputum aliquots for cytokine analysis - See MOP5 7.1.5.4a   | 339 | 4                | 600              | 246     | 0             |  |
| Sputum                    | CYTZ          | Sputum aliquots for cytokine analysis mixed with Zymo Shield - See MOP5 7.1.5.4a                              | 341 | 1                | 600              | --      | --            |  |
| Sputum                    | MICZ          | Sputum for microbiology analysis with Zymo Shield- See MOP5 7.1.3   | 285 | 2                | 200              | --      | --            |  |
| Sputum                    | NUC           | Sputum aliquots for nucleotide analysis - See MOP5 7.1.5.4a   | 349 | 4                | 700              | 257     | 0             |  |
| Sputum                    | OSMO          | Sputum for osmotic pressure analysis - See MOP5 7.1.4   | 277 | 1                | --               | 0       | 0             |  |
| Sputum Cell Pellet        | PEL           | Cell pellet in DPBS and Zymo shield - See MOP5 7.1.8  | 277 | 2                | 500              | --      | --            |  |
| Urine                     | UR            | Urine from specimen cup   | 567 | 10               | 1000             | 563     | 224           |  |
| Urine (Preserved)         | PUR           | Urine with ascorbic acid preservative   | 559 | 10               | 1000             | 554     | 219           |  |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 1D. SPIROMICS II Biospecimen Inventory Status for Stratum Enrolled 4**

Based on BSP data March 7, 2023

| Material                  | Material Type | Material Description  | N*  | Visit 5          |                  |         |               |  |
|---------------------------|---------------|---|-----|------------------|------------------|---------|---------------|--|
|                           |               |   |     | QTY <sup>†</sup> | VOL <sup>‡</sup> | In V1V5 | In V1V2V4V5** |  |
| Blood                     | BL            | Blood in Paxgene RNA tube containing anticoagulant and RNA stabilizers  | 168 | 1                | 2500             | 0       | 0             |  |
| Buccal Swab               | BUC           | Buccal swab (elective procedure)  | 12  | 1                | --               | --      | --            |  |
| DNA                       | DN            | DNA extracted from blood lysate (prepared at the sites)   | 176 | 4                | 243              | 127     | 0             |  |
| Exhaled Breath Condensate | EBC           | Exhaled breath condensate (elective procedure)  | 31  | 2                | 500              | --      | --            |  |
| Hair Follicle             | HAIRH         | Hair follicle from scalp (elective procedure)   | 11  | 1                | --               | --      | --            |  |
| Plasma                    | PL100         | Plasma in P100 tube with a mechanical separator and sprayed on K2EDTA anti-coagulant, and protein stabilizers | 167 | 13               | 150              | 155     | 44            |  |
| Plasma                    | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant   | 181 | 27               | 150              | 180     | 57            |  |
| Plasma                    | PLYT          | Plasma in yellow top tube with 1.5ml of ACD anticoagulant   | 182 | 14               | 150              | 180     | 55            |  |
| Serum                     | SE            | Serum in red top tube with clot activator and no anticoagulant  | 181 | 28               | 150              | 181     | 59            |  |
| Sputolysin                | SLSUP         | Sputolysin/DPBS samples - See MOP5 7.1.5.7  | 39  | 2                | 5000             | --      | --            |  |
| Sputum                    | CYT           | Sputum aliquots for cytokine analysis - See MOP5 7.1.5.4a   | 47  | 3                | 500              | 15      | 0             |  |
| Sputum                    | CY TZ         | Sputum aliquots for cytokine analysis mixed with Zymo Shield - See MOP5 7.1.5.4a                              | 50  | 1                | 600              | --      | --            |  |
| Sputum                    | MICZ          | Sputum for microbiology analysis with Zymo Shield- See MOP5 7.1.3   | 38  | 2                | 203              | --      | --            |  |
| Sputum                    | NUC           | Sputum aliquots for nucleotide analysis - See MOP5 7.1.5.4a   | 50  | 4                | 500              | 18      | 0             |  |
| Sputum                    | OSMO          | Sputum for osmotic pressure analysis - See MOP5 7.1.4   | 38  | 1                | --               | 0       | 0             |  |
| Sputum Cell Pellet        | PEL           | Cell pellet in DPBS and Zymo shield - See MOP5 7.1.8  | 36  | 2                | 500              | --      | --            |  |
| Urine                     | UR            | Urine from specimen cup   | 179 | 10               | 1000             | 175     | 57            |  |
| Urine (Preserved)         | PUR           | Urine with ascorbic acid preservative   | 176 | 10               | 1000             | 171     | 52            |  |

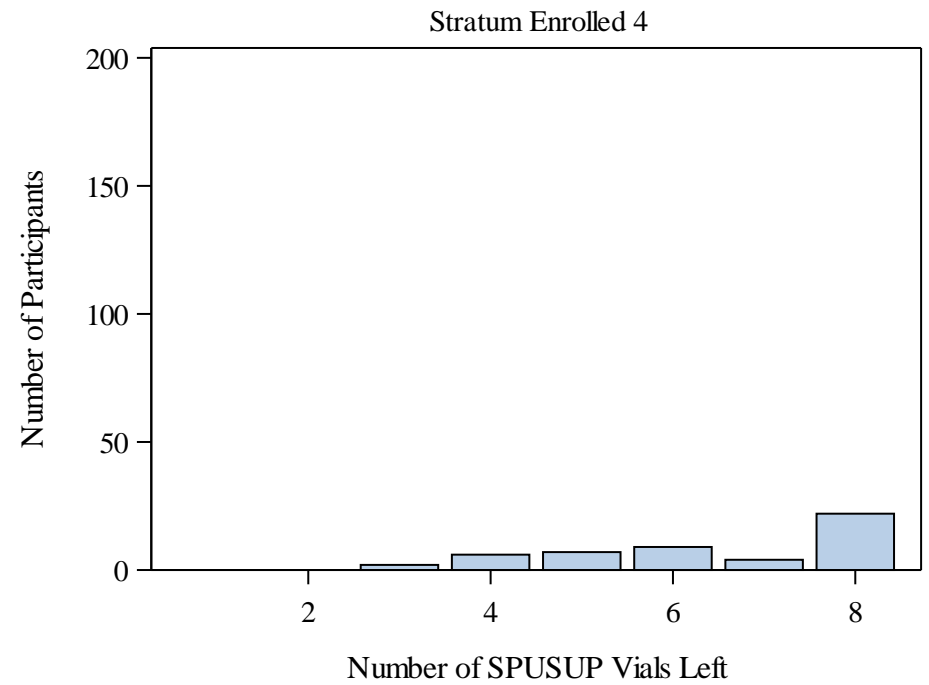
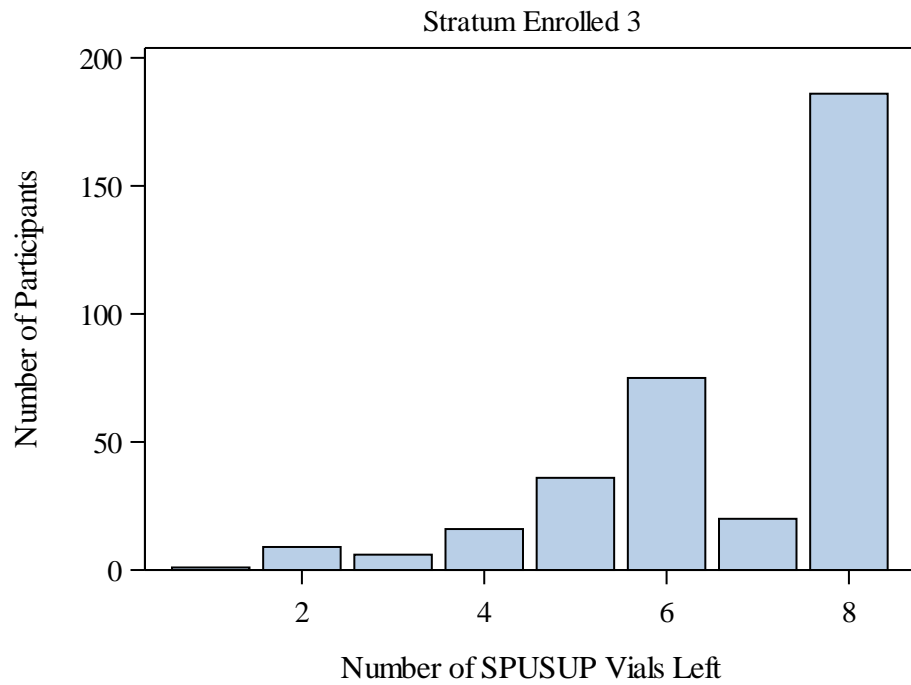
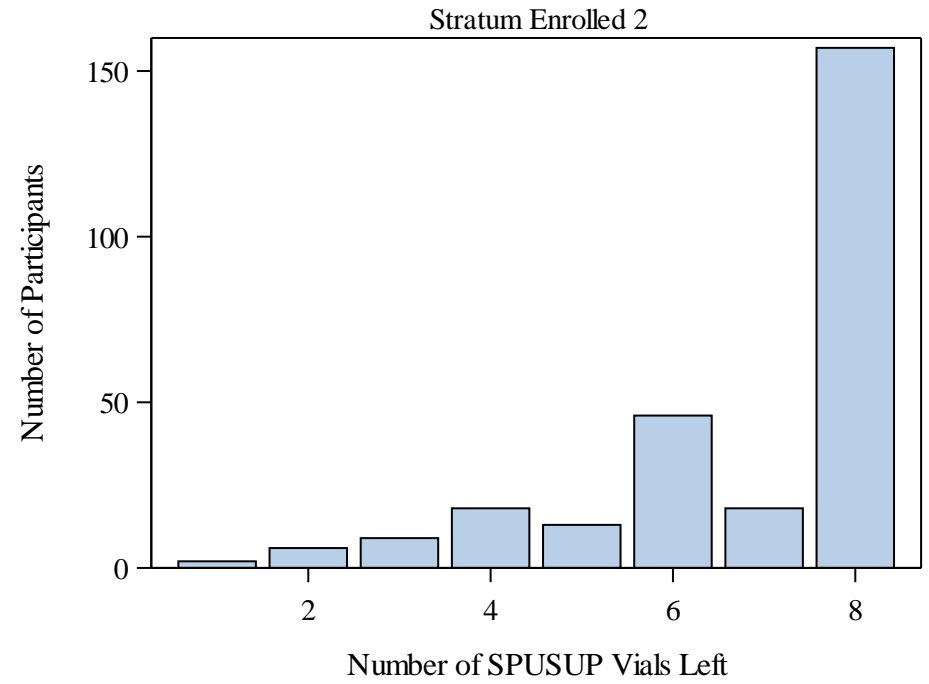
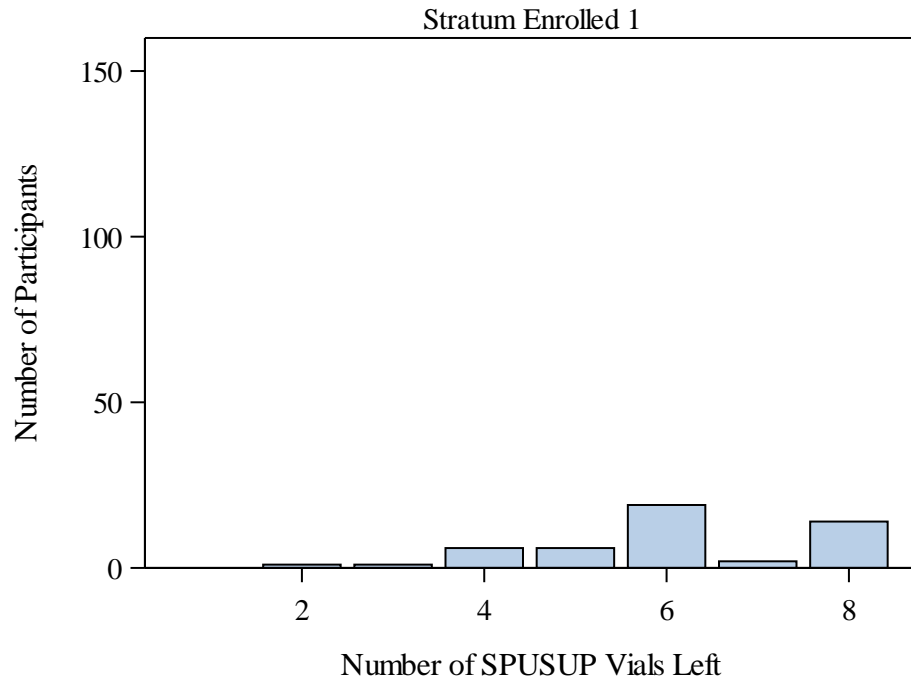
\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

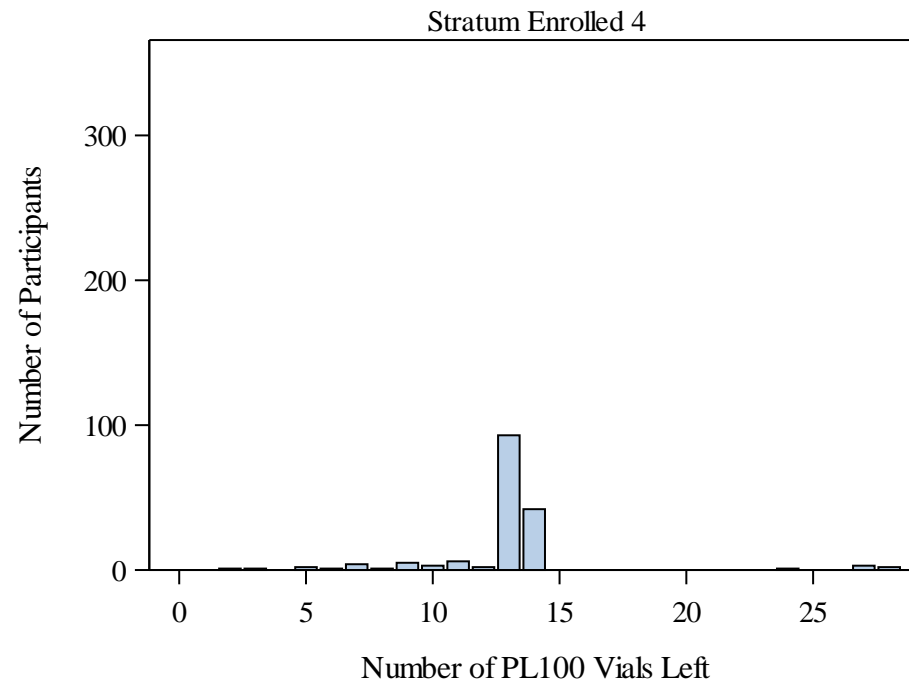
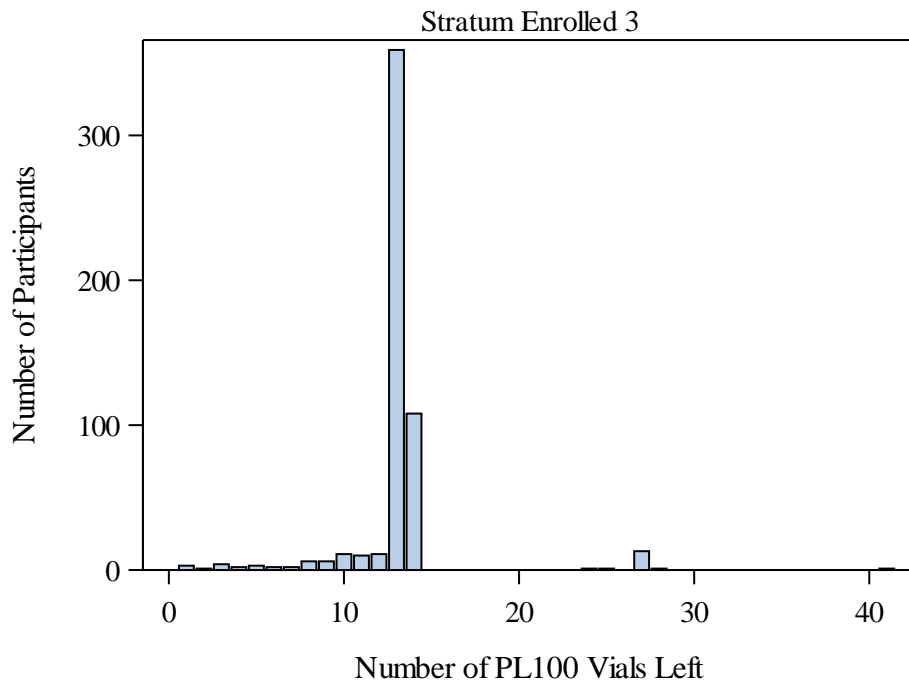
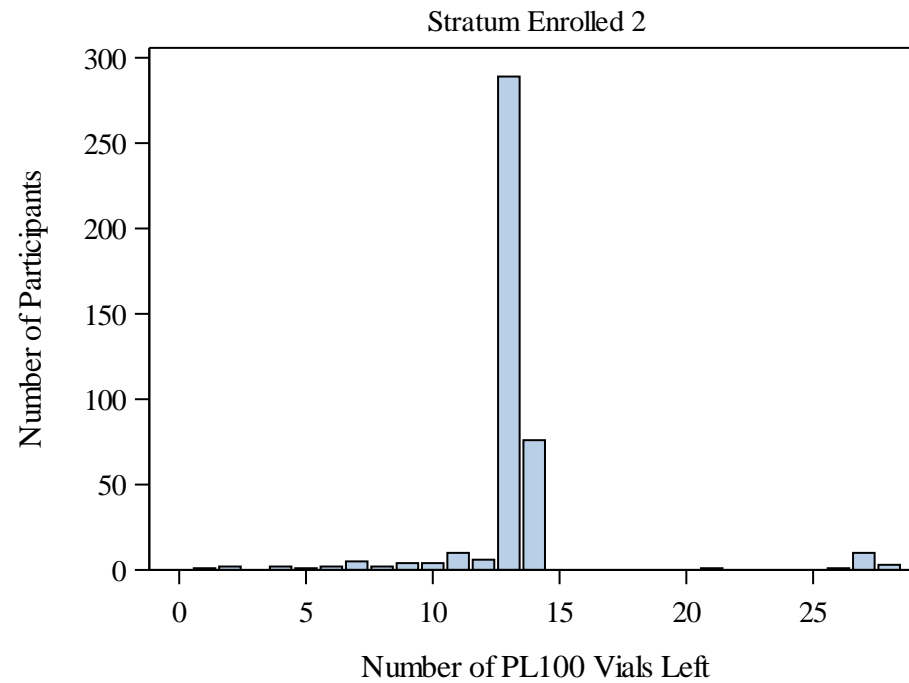
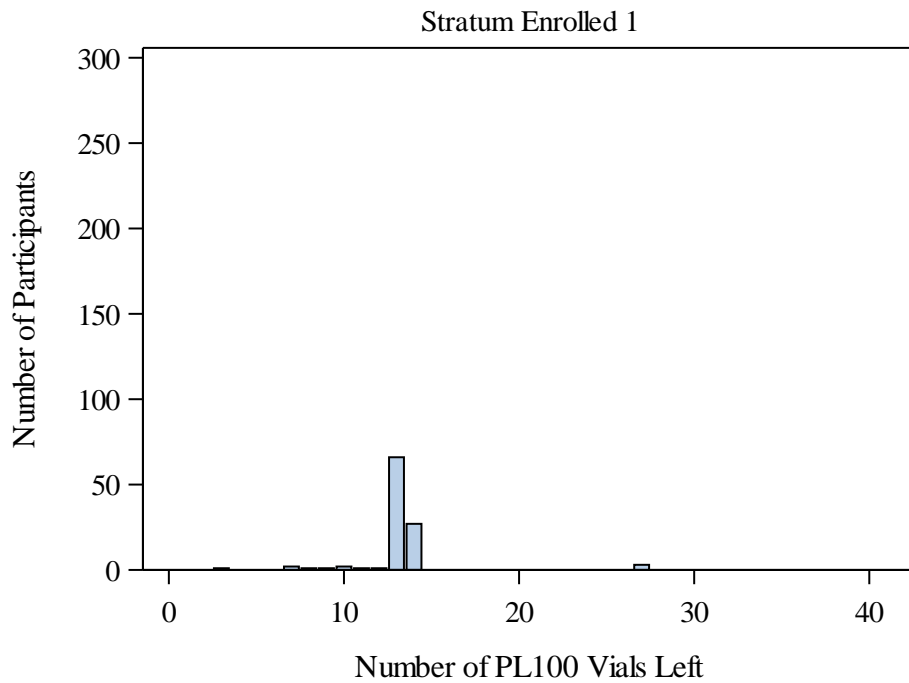
‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

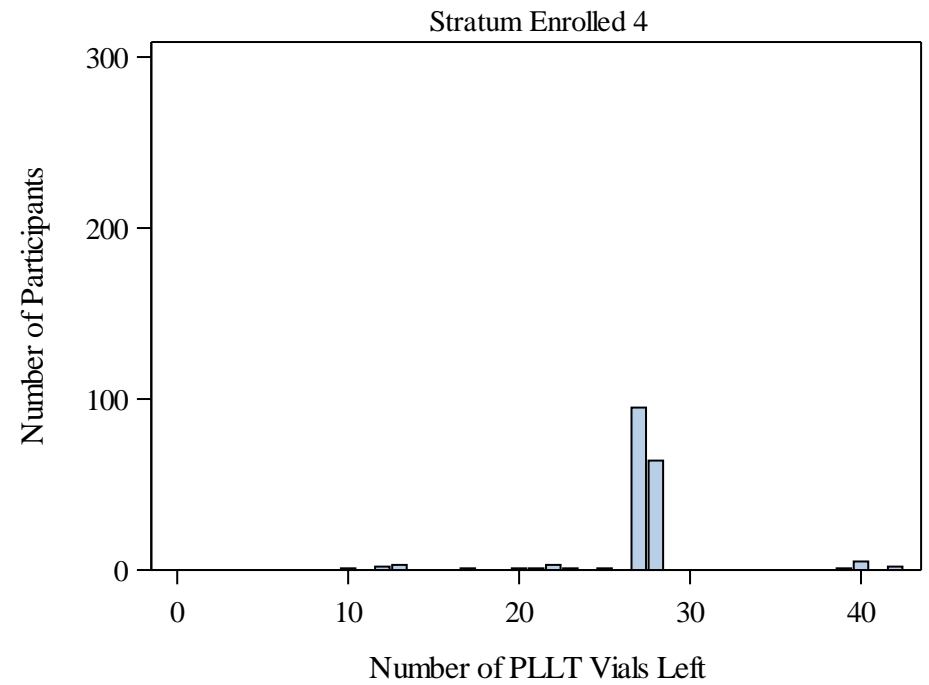
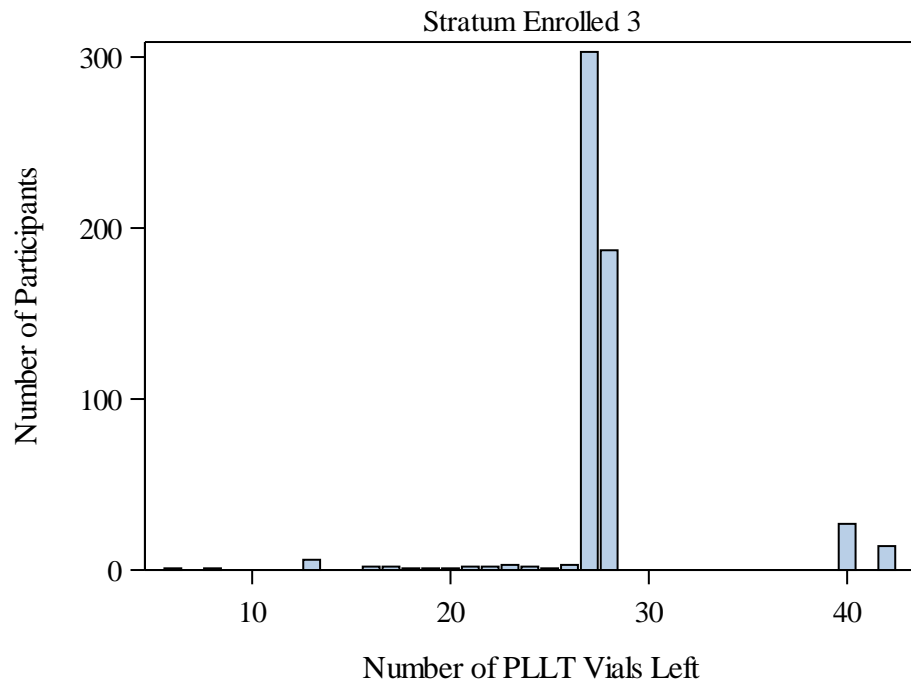
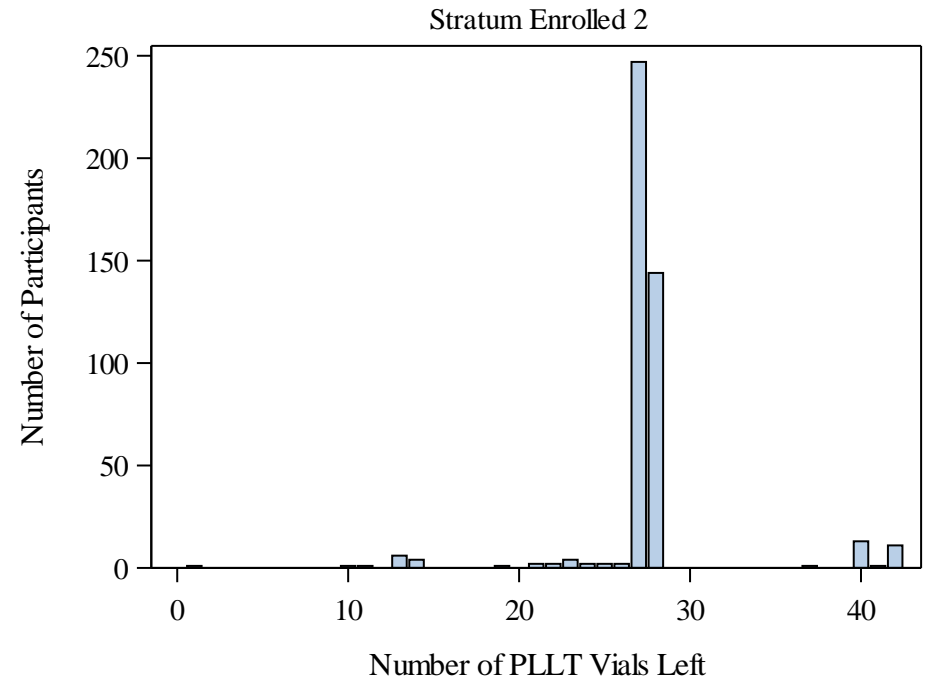
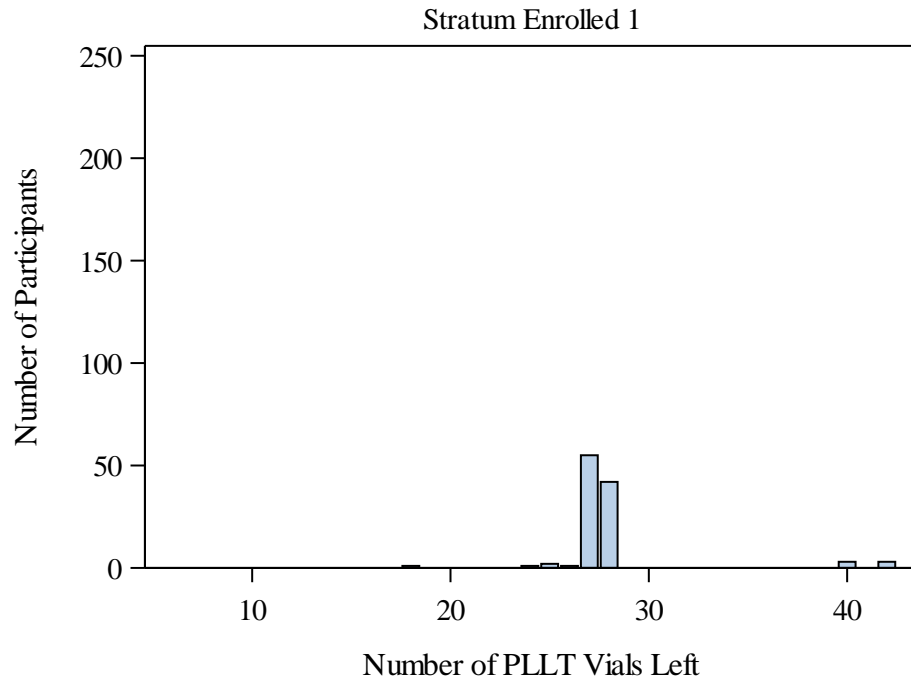
**Figure 1. SPIROMICS II Biospecimen Inventory State of Visit 5 SPUSUP**



**Figure 2. SPIROMICS II Biospecimen Inventory State of Visit 5 PL100**

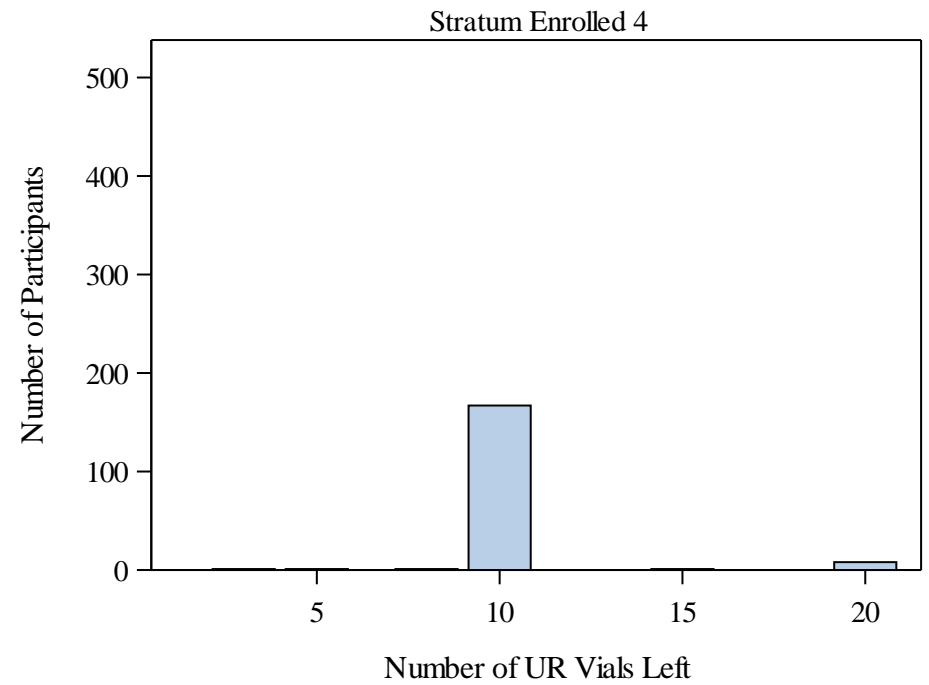
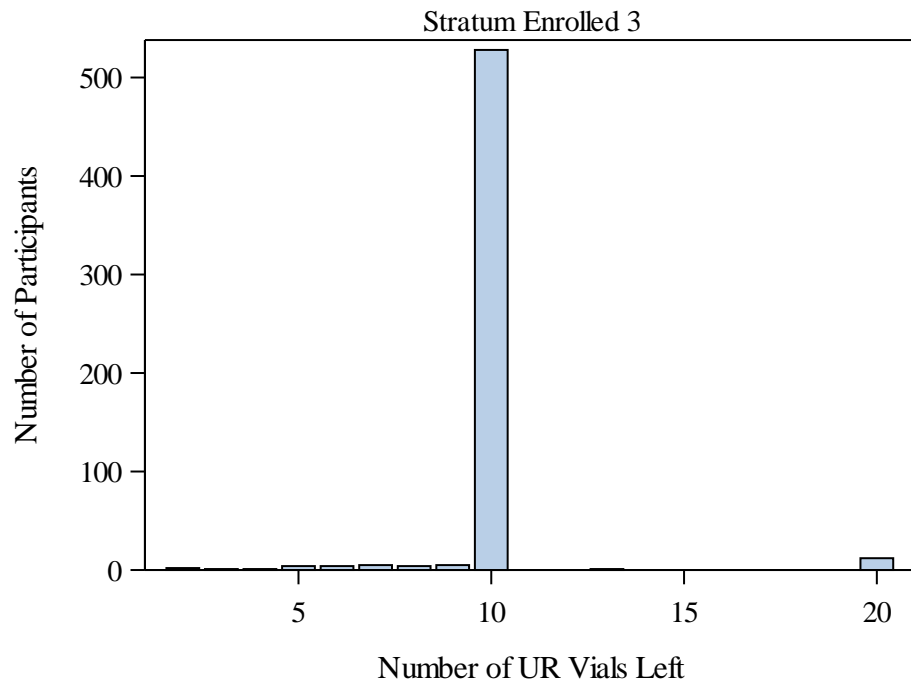
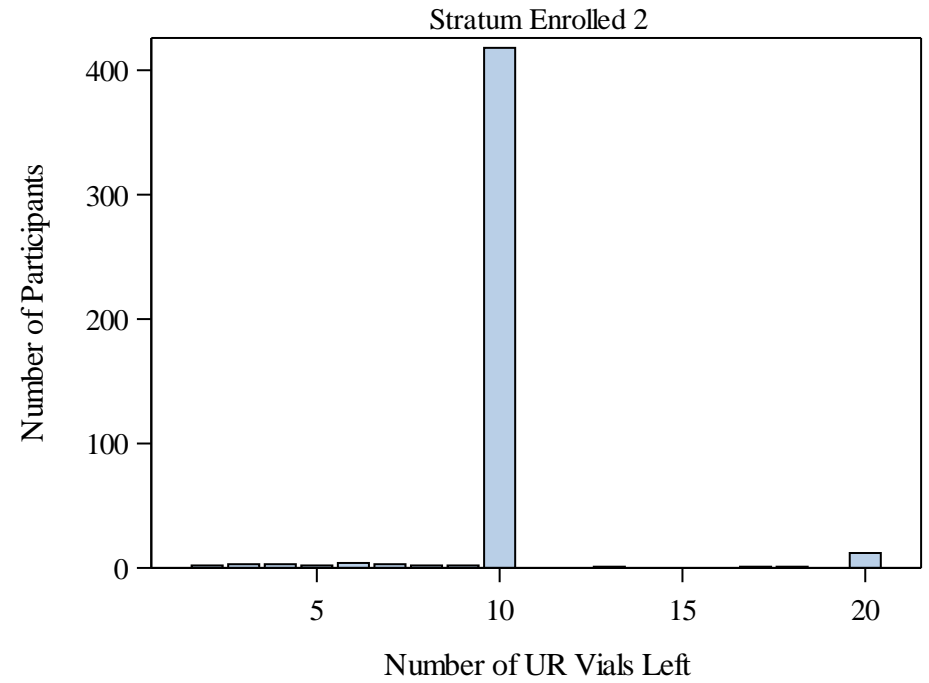
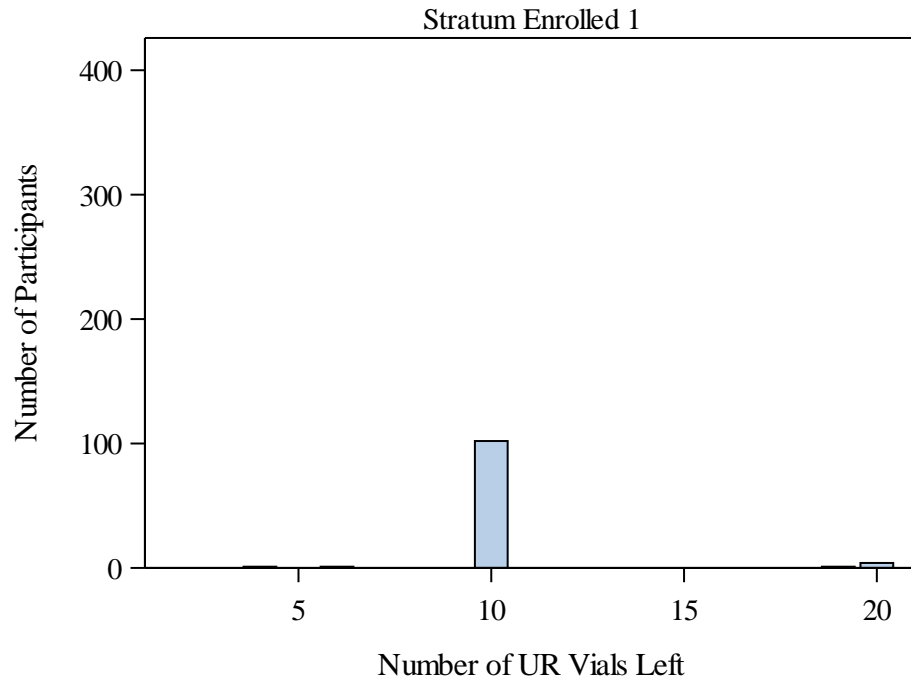


**Figure 3. SPIROMICS II Biospecimen Inventory State of Visit 5 PLLT**

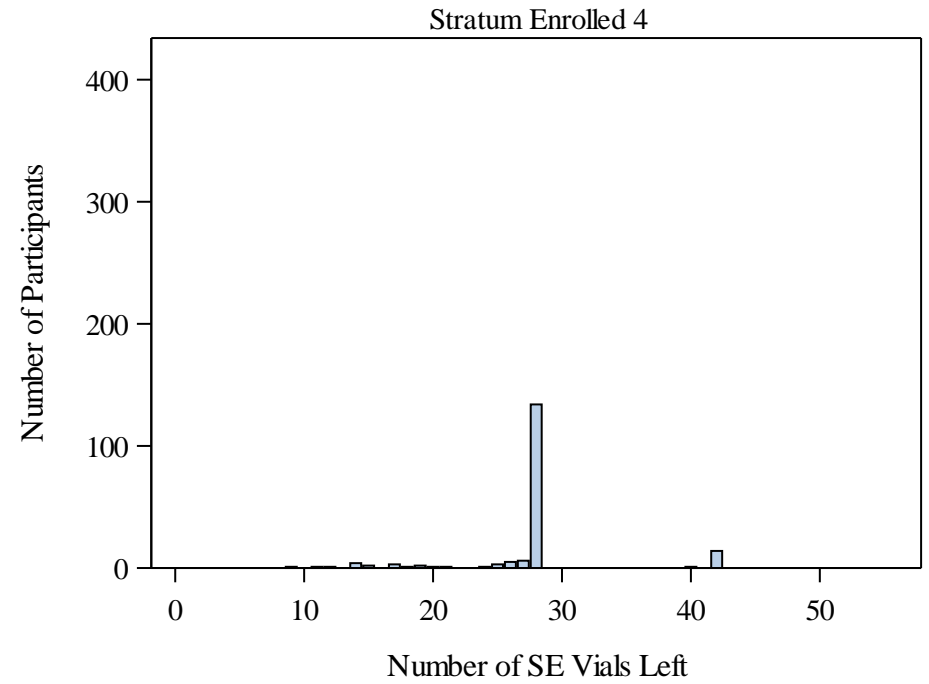
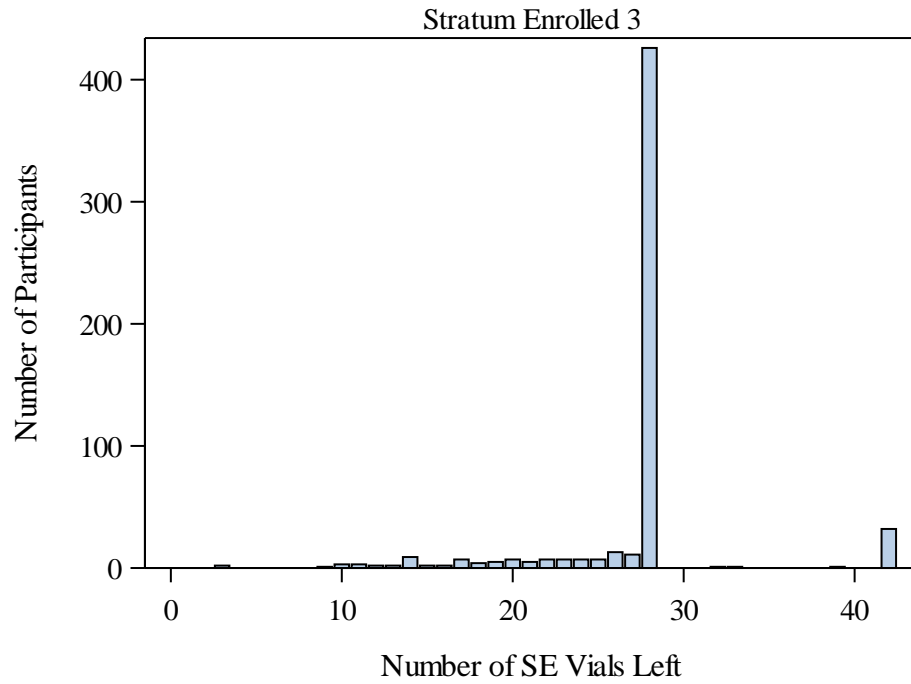
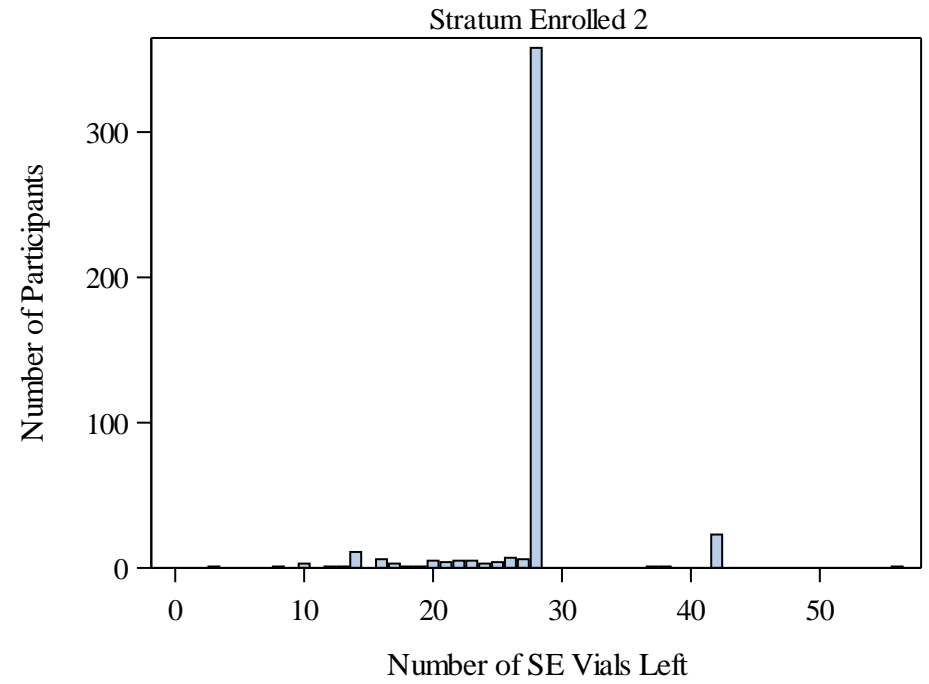
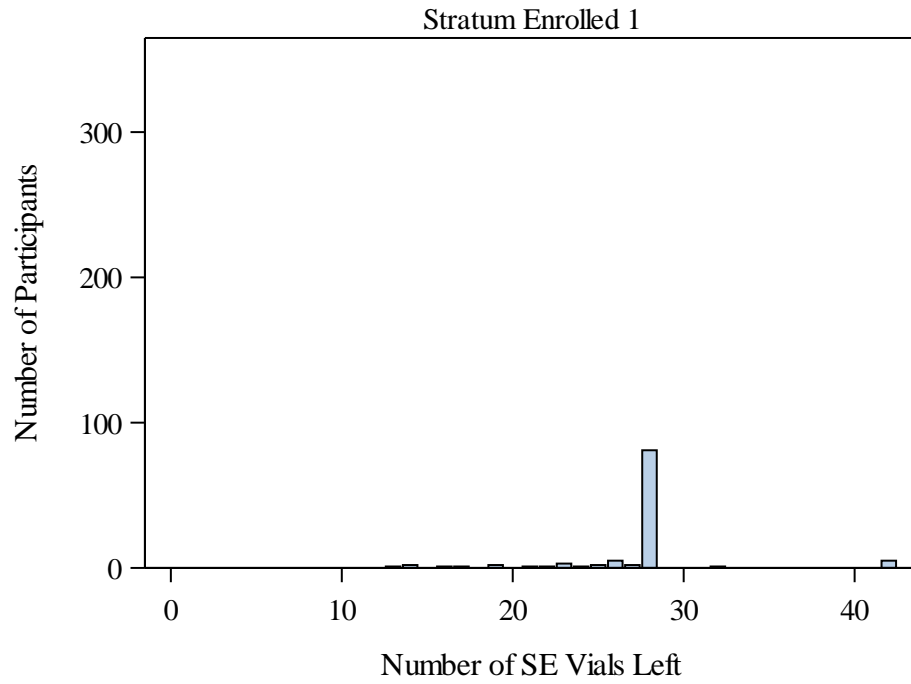




**Figure 4. SPIROMICS II Biospecimen Inventory State of Visit 5 Urine (unpreserved)**



**Figure 5. SPIROMICS II Biospecimen Inventory State of Visit 5 Serum**



**Table 2. SPIROMICS II Biospecimen Inventory Status of Replicate Samples for All Stratum**

Based on BSP data March 7, 2023

| Material          | Material Type | Material Description  | N* | Visit 5          |                  |         |               |  |
|-------------------|---------------|---|----|------------------|------------------|---------|---------------|--|
|                   |               |   |    | QTY <sup>†</sup> | VOL <sup>‡</sup> | In V1V5 | In V1V2V4V5** |  |
| Blood             | BL            | Blood in Paxgene RNA tube containing anticoagulant and RNA stabilizers  | 39 | 1                | 2500             | 0       | 0             |  |
| DNA               | DN            | DNA extracted from blood lysate (prepared at the sites)   | 30 | 4                | 243              | 0       | 0             |  |
| Plasma            | PL100         | Plasma in P100 tube with a mechanical separator and sprayed on K2EDTA anti-coagulant, and protein stabilizers | 40 | 14               | 150              | 1       | 0             |  |
| Plasma            | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant   | 81 | 13               | 150              | 10      | 0             |  |
| Plasma            | PLYT          | Plasma in yellow top tube with 1.5ml of ACD anticoagulant   | 41 | 14               | 150              | 2       | 0             |  |
| Serum             | SE            | Serum in red top tube with clot activator and no anticoagulant  | 83 | 14               | 150              | 13      | 0             |  |
| Urine             | UR            | Urine from specimen cup   | 40 | 10               | 1000             | 3       | 0             |  |
| Urine (Preserved) | PUR           | Urine with ascorbic acid preservative   | 38 | 10               | 1000             | 3       | 0             |  |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 2A. SPIROMICS II Biospecimen Inventory Status of Replicate Samples for Stratum Enrolled 1**

Based on BSP data March 7, 2023

| Material          | Material Type | Material Description  | N* | Visit 5          |                  |         |               |  |
|-------------------|---------------|---|----|------------------|------------------|---------|---------------|--|
|                   |               |   |    | QTY <sup>†</sup> | VOL <sup>‡</sup> | In V1V5 | In V1V2V4V5** |  |
| Blood             | BL            | Blood in Paxgene RNA tube containing anticoagulant and RNA stabilizers  | 4  | 1                | 2500             | 0       | 0             |  |
| DNA               | DN            | DNA extracted from blood lysate (prepared at the sites)   | 2  | 4                | 243              | 0       | 0             |  |
| Plasma            | PL100         | Plasma in P100 tube with a mechanical separator and sprayed on K2EDTA anti-coagulant, and protein stabilizers | 3  | 14               | 150              | 0       | 0             |  |
| Plasma            | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant   | 6  | 14               | 150              | 0       | 0             |  |
| Plasma            | PLYT          | Plasma in yellow top tube with 1.5ml of ACD anticoagulant   | 4  | 14               | 150              | 0       | 0             |  |
| Serum             | SE            | Serum in red top tube with clot activator and no anticoagulant  | 6  | 14               | 150              | 0       | 0             |  |
| Urine             | UR            | Urine from specimen cup   | 5  | 10               | 1000             | 1       | 0             |  |
| Urine (Preserved) | PUR           | Urine with ascorbic acid preservative   | 4  | 10               | 1000             | 1       | 0             |  |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 2B. SPIROMICS II Biospecimen Inventory Status of Replicate Samples for Stratum Enrolled 2**

Based on BSP data March 7, 2023

| Material          | Material Type | Material Description  | N* | Visit 5          |                  |         |               |  |
|-------------------|---------------|---|----|------------------|------------------|---------|---------------|--|
|                   |               |   |    | QTY <sup>†</sup> | VOL <sup>‡</sup> | In V1V5 | In V1V2V4V5** |  |
| Blood             | BL            | Blood in Paxgene RNA tube containing anticoagulant and RNA stabilizers  | 15 | 1                | 2500             | 0       | 0             |  |
| DNA               | DN            | DNA extracted from blood lysate (prepared at the sites)   | 6  | 4                | 243              | 0       | 0             |  |
| Plasma            | PL100         | Plasma in P100 tube with a mechanical separator and sprayed on K2EDTA anti-coagulant, and protein stabilizers | 14 | 14               | 150              | 0       | 0             |  |
| Plasma            | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant   | 26 | 13               | 150              | 4       | 0             |  |
| Plasma            | PLYT          | Plasma in yellow top tube with 1.5ml of ACD anticoagulant   | 12 | 14               | 150              | 0       | 0             |  |
| Serum             | SE            | Serum in red top tube with clot activator and no anticoagulant  | 27 | 14               | 150              | 3       | 0             |  |
| Urine             | UR            | Urine from specimen cup   | 14 | 10               | 1000             | 1       | 0             |  |
| Urine (Preserved) | PUR           | Urine with ascorbic acid preservative   | 13 | 10               | 1000             | 1       | 0             |  |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 2C. SPIROMICS II Biospecimen Inventory Status of Replicate Samples for Stratum Enrolled 3**

Based on BSP data March 7, 2023

| Material          | Material Type | Material Description  | N* | Visit 5          |                  |         |               |  |
|-------------------|---------------|---|----|------------------|------------------|---------|---------------|--|
|                   |               |   |    | QTY <sup>†</sup> | VOL <sup>‡</sup> | In V1V5 | In V1V2V4V5** |  |
| Blood             | BL            | Blood in Paxgene RNA tube containing anticoagulant and RNA stabilizers  | 10 | 1                | 9250             | 0       | 0             |  |
| DNA               | DN            | DNA extracted from blood lysate (prepared at the sites)   | 16 | 4                | 243              | 0       | 0             |  |
| Plasma            | PL100         | Plasma in P100 tube with a mechanical separator and sprayed on K2EDTA anti-coagulant, and protein stabilizers | 17 | 14               | 150              | 1       | 0             |  |
| Plasma            | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant   | 41 | 13               | 150              | 5       | 0             |  |
| Plasma            | PLYT          | Plasma in yellow top tube with 1.5ml of ACD anticoagulant   | 20 | 14               | 150              | 2       | 0             |  |
| Serum             | SE            | Serum in red top tube with clot activator and no anticoagulant  | 35 | 14               | 150              | 8       | 0             |  |
| Urine             | UR            | Urine from specimen cup   | 13 | 10               | 1000             | 0       | 0             |  |
| Urine (Preserved) | PUR           | Urine with ascorbic acid preservative   | 13 | 10               | 1000             | 0       | 0             |  |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 2D. SPIROMICS II Biospecimen Inventory Status of Replicate Samples for Stratum Enrolled 4**

Based on BSP data March 7, 2023

| Material          | Material Type | Material Description  | N* | Visit 5          |                  |         |               |  |
|-------------------|---------------|---|----|------------------|------------------|---------|---------------|--|
|                   |               |   |    | QTY <sup>†</sup> | VOL <sup>‡</sup> | In V1V5 | In V1V2V4V5** |  |
| Blood             | BL            | Blood in Paxgene RNA tube containing anticoagulant and RNA stabilizers  | 10 | 1                | 2500             | 0       | 0             |  |
| DNA               | DN            | DNA extracted from blood lysate (prepared at the sites)   | 6  | 4                | 243              | 0       | 0             |  |
| Plasma            | PL100         | Plasma in P100 tube with a mechanical separator and sprayed on K2EDTA anti-coagulant, and protein stabilizers | 6  | 14               | 150              | 0       | 0             |  |
| Plasma            | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant   | 8  | 13               | 150              | 1       | 0             |  |
| Plasma            | PLYT          | Plasma in yellow top tube with 1.5ml of ACD anticoagulant   | 5  | 14               | 150              | 0       | 0             |  |
| Serum             | SE            | Serum in red top tube with clot activator and no anticoagulant  | 15 | 14               | 150              | 2       | 0             |  |
| Urine             | UR            | Urine from specimen cup   | 8  | 10               | 1000             | 1       | 0             |  |
| Urine (Preserved) | PUR           | Urine with ascorbic acid preservative   | 8  | 10               | 1000             | 1       | 0             |  |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 3. SPIROMICS II Bronchoscopy Substudy Biospecimen Inventory Status for All Stratums**

Based on BSP data March 7, 2023

| Visit                      | Material                     | Material Type | Material Description   | N* | QTY <sup>†</sup> | VOL <sup>‡</sup> |
|----------------------------|------------------------------|---------------|--|----|------------------|------------------|
| <b>Pre-Bronchoscopy V1</b> |                              |               |  |    |                  |                  |
|                            | Exhaled Breath Condensate    | EBC           | Exhaled breath condensate (elective procedure)   | 26 | 3                | 400              |
|                            | Sputolysin                   | SLSUP         | Sputolysin/DPBS samples - See MOP5 7.1.5.7   | 33 | 2                | 9400             |
|                            | Sputum                       | CYT           | Sputum aliquots for cytokine analysis - See MOP5 7.1.5.4a                              | 39 | 4                | 1000             |
|                            | Sputum                       | CYTZ          | Sputum aliquots for cytokine analysis mixed with Zymo Shield - See MOP5 7.1.5.4a       | 39 | 1                | 600              |
|                            | Sputum                       | MICZ          | Sputum for microbiology analysis with Zymo Shield- See MOP5 7.1.3                      | 35 | 2                | 200              |
|                            | Sputum                       | MUC           | Whole sputum with guanidine reduction buffer for mucin analysis - See MOP5 7.1.2       | 1  | 1                | --               |
|                            | Sputum                       | NUC           | Sputum aliquots for nucleotide analysis - See MOP5 7.1.5.4a                            | 40 | 4                | 1000             |
|                            | Sputum                       | OSMO          | Sputum for osmotic pressure analysis - See MOP5 7.1.4                                  | 35 | 1                | --               |
|                            | Sputum Cell Pellet           | PEL           | Cell pellet in DPBS and Zymo shield - See MOP5 7.1.8                                   | 30 | 2                | 500              |
| <b>Bronchoscopy V2</b>     |                              |               |  |    |                  |                  |
|                            | Bronchial Lavage Fluid       | BLBIO         | Bronchial lavage fluid with RNAlater for microbiome - See MOP8 4.3.1                   | 59 | 1                | 13500            |
|                            | Bronchial Lavage Fluid       | BLMAC         | Bronchial lavage fluid prepared for alveolar macrophage isolation - See MOP8 4.3.1     | 53 | 1                | 600              |
|                            | Bronchial Lavage Fluid       | BLNP          | Bronchial lavage fluid with no preservative for microbiome - See MOP8 4.3.1            | 55 | 1                | 2000             |
|                            | Bronchial Lavage Supernatant | BLSUP         | Bronchial lavage supernatant - See MOP8 4.3.1  | 59 | 43               | 1000             |
|                            | Bronchial Wash               | BWBIO         | Bronchial wash with RNAlater for microbiome - See MOP8 4.2                             | 36 | 1                | 13500            |
|                            | Bronchial Wash Cell Pellet   | BWPEL         | Bronchial wash cell pellet - See MOP8 4.2  | 54 | 1                | 600              |
|                            | Bronchial Wash Supernatant   | BWSUP         | Bronchial wash supernatant - See MOP8 4.2  | 55 | 10               | 500              |
|                            | Cytological Brush for DNA    | CBDNA         | Cytological brushes from large airway for DNA methylation/epigenomics - See MOP8 4.4.1 | 53 | 2                | 1500             |
|                            | DNA                          | DN            | DNA extracted from blood lysate (prepared at the sites)                                | 31 | 4                | 235              |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5



**Table 3. SPIROMICS II Bronchoscopy Substudy Biospecimen Inventory Status for All Stratums**

Based on BSP data March 7, 2023

| Visit | Material                      | Material Type | Material Description   | N* | QTY <sup>†</sup> | VOL <sup>‡</sup> |
|-------|-------------------------------|---------------|--|----|------------------|------------------|
|       | Large Airway Epithelial Cells | EPRNA         | Epithelial cells from large airway cytological brushings for RNA - See MOP8 4.4.1                        | 49 | 1                | 600              |
|       | Nasal Cells                   | NCELL         | Nasal cells from nasal brushing just prior to bronchoscopy - See MOP8 3.4.5                              | 58 | 2                | --               |
|       | Oral Rinse                    | ORRNS         | Oral rinse before bronchial wash - See MOP8 3.4.6 Step 2   | 59 | 3                | 15000            |
|       | Plasma                        | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant                                      | 59 | 28               | 150              |
|       | Protected Brush               | PROBR         | Protected brush specimens - See MOP8 4.1   | 58 | 3                | --               |
|       | Protected brush in PBS        | PRMUP         | Epithelial cells from large airway cytological brushings for Mucins in PBS - See MOP8 4.4.2              | 50 | 1                | --               |
|       | Protected brush in Urea       | PRMUU         | Epithelial cells from large airway cytological brushings for Mucins in Urea - See MOP8 4.4.2             | 3  | 1                | --               |
|       | Saline                        | BIOSA         | Saline through scope (microbiome control) - See MOP8 3.4.10  | 59 | 1                | 12500            |
|       | Saline                        | SCOSA         | Saline alone (scope control) - See MOP8 3.4.10   | 58 | 1                | 12500            |
|       | Serum                         | SE            | Serum in red top tube with clot activator and no anticoagulant   | 59 | 28               | 150              |
|       | Small Airway Epithelial Cells | OPDNL         | Epithelial cells from optional small airway cytological brushes from left side for DNA - See MOP8 4.4.3  | 16 | 1                | 1500             |
|       | Small Airway Epithelial Cells | OPDNR         | Epithelial cells from optional small airway cytological brushes from right side for DNA - See MOP8 4.4.3 | 15 | 1                | 1500             |
|       | Small Airway Epithelial Cells | OPRNL         | Epithelial cells from optional small airway cytological brushes from left side for RNA - See MOP8 4.4.3  | 17 | 1                | 600              |
|       | Small Airway Epithelial Cells | OPRNR         | Epithelial cells from optional small airway cytological brushes from right side for RNA - See MOP8 4.4.3 | 16 | 1                | 600              |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 3A. SPIROMICS II Bronchoscopy Substudy Biospecimen Inventory Status for Stratum Enrolled 1**

Based on BSP data March 7, 2023

| Visit                      | Material                      | Material Type | Material Description   | N* | QTY <sup>†</sup> | VOL <sup>‡</sup> |
|----------------------------|-------------------------------|---------------|--|----|------------------|------------------|
| <b>Pre-Bronchoscopy V1</b> |                               |               |  |    |                  |                  |
|                            | Exhaled Breath Condensate     | EBC           | Exhaled breath condensate (elective procedure)   | 9  | 4                | 400              |
|                            | Sputolysin                    | SLSUP         | Sputolysin/DPBS samples - See MOP5 7.1.5.7   | 7  | 2                | 11000            |
|                            | Sputum                        | CYT           | Sputum aliquots for cytokine analysis - See MOP5 7.1.5.4a                              | 9  | 4                | 1000             |
|                            | Sputum                        | CYTZ          | Sputum aliquots for cytokine analysis mixed with Zymo Shield - See MOP5 7.1.5.4a       | 9  | 1                | 600              |
|                            | Sputum                        | MICZ          | Sputum for microbiology analysis with Zymo Shield- See MOP5 7.1.3                      | 8  | 2                | 200              |
|                            | Sputum                        | NUC           | Sputum aliquots for nucleotide analysis - See MOP5 7.1.5.4a                            | 9  | 4                | 1000             |
|                            | Sputum                        | OSMO          | Sputum for osmotic pressure analysis - See MOP5 7.1.4                                  | 8  | 1                | --               |
|                            | Sputum Cell Pellet            | PEL           | Cell pellet in DPBS and Zymo shield - See MOP5 7.1.8                                   | 6  | 2                | 500              |
| <b>Bronchoscopy V2</b>     |                               |               |  |    |                  |                  |
|                            | Bronchial Lavage Fluid        | BLBIO         | Bronchial lavage fluid with RNAlater for microbiome - See MOP8 4.3.1                   | 11 | 1                | 13500            |
|                            | Bronchial Lavage Fluid        | BLMAC         | Bronchial lavage fluid prepared for alveolar macrophage isolation - See MOP8 4.3.1     | 10 | 1                | 600              |
|                            | Bronchial Lavage Fluid        | BLNP          | Bronchial lavage fluid with no preservative for microbiome - See MOP8 4.3.1            | 10 | 1                | 2000             |
|                            | Bronchial Lavage Supernatant  | BLSUP         | Bronchial lavage supernatant - See MOP8 4.3.1  | 11 | 44               | 1000             |
|                            | Bronchial Wash                | BWBIO         | Bronchial wash with RNAlater for microbiome - See MOP8 4.2                             | 7  | 1                | 13500            |
|                            | Bronchial Wash Cell Pellet    | BWPEL         | Bronchial wash cell pellet - See MOP8 4.2  | 11 | 1                | 600              |
|                            | Bronchial Wash Supernatant    | BWSUP         | Bronchial wash supernatant - See MOP8 4.2  | 10 | 10               | 500              |
|                            | Cytological Brush for DNA     | CBDNA         | Cytological brushes from large airway for DNA methylation/epigenomics - See MOP8 4.4.1 | 10 | 2                | 1500             |
|                            | DNA                           | DN            | DNA extracted from blood lysate (prepared at the sites)                                | 8  | 4                | 235              |
|                            | Large Airway Epithelial Cells | EPRNA         | Epithelial cells from large airway cytological brushings for RNA - See MOP8 4.4.1      | 9  | 1                | 600              |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 3A. SPIROMICS II Bronchoscopy Substudy Biospecimen Inventory Status for Stratum Enrolled 1**

Based on BSP data March 7, 2023

| Visit | Material               | Material Type | Material Description  | N* | QTY <sup>†</sup> | VOL <sup>‡</sup> |
|-------|------------------------|---------------|---|----|------------------|------------------|
|       | Nasal Cells            | NCELL         | Nasal cells from nasal brushing just prior to bronchoscopy - See MOP8 3.4.5                 | 11 | 2                | --               |
|       | Oral Rinse             | ORRNS         | Oral rinse before bronchial wash - See MOP8 3.4.6 Step 2                                    | 11 | 3                | 15000            |
|       | Plasma                 | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant                         | 12 | 28               | 150              |
|       | Protected Brush        | PROBR         | Protected brush specimens - See MOP8 4.1  | 11 | 3                | --               |
|       | Protected brush in PBS | PRMUP         | Epithelial cells from large airway cytological brushings for Mucins in PBS - See MOP8 4.4.2 | 10 | 1                | --               |
|       | Saline                 | BIOSA         | Saline through scope (microbiome control) - See MOP8 3.4.10                                 | 11 | 1                | 12500            |
|       | Saline                 | SCOSA         | Saline alone (scope control) - See MOP8 3.4.10  | 11 | 1                | 12500            |
|       | Serum                  | SE            | Serum in red top tube with clot activator and no anticoagulant                              | 12 | 28               | 150              |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 3B. SPIROMICS II Bronchoscopy Substudy Biospecimen Inventory Status for Stratum Enrolled 2**

Based on BSP data March 7, 2023

| Visit                      | Material                      | Material Type | Material Description   | N* | QTY <sup>†</sup> | VOL <sup>‡</sup> |
|----------------------------|-------------------------------|---------------|--|----|------------------|------------------|
| <b>Pre-Bronchoscopy V1</b> |                               |               |  |    |                  |                  |
|                            | Exhaled Breath Condensate     | EBC           | Exhaled breath condensate (elective procedure)   | 10 | 3                | 380              |
|                            | Sputolysin                    | SLSUP         | Sputolysin/DPBS samples - See MOP5 7.1.5.7   | 15 | 2                | 6500             |
|                            | Sputum                        | CYT           | Sputum aliquots for cytokine analysis - See MOP5 7.1.5.4a                              | 18 | 4                | 962              |
|                            | Sputum                        | CYTZ          | Sputum aliquots for cytokine analysis mixed with Zymo Shield - See MOP5 7.1.5.4a       | 18 | 1                | 780              |
|                            | Sputum                        | MICZ          | Sputum for microbiology analysis with Zymo Shield- See MOP5 7.1.3                      | 15 | 2                | 200              |
|                            | Sputum                        | NUC           | Sputum aliquots for nucleotide analysis - See MOP5 7.1.5.4a                            | 19 | 4                | 886              |
|                            | Sputum                        | OSMO          | Sputum for osmotic pressure analysis - See MOP5 7.1.4                                  | 15 | 1                | --               |
|                            | Sputum Cell Pellet            | PEL           | Cell pellet in DPBS and Zymo shield - See MOP5 7.1.8                                   | 13 | 2                | 500              |
| <b>Bronchoscopy V2</b>     |                               |               |  |    |                  |                  |
|                            | Bronchial Lavage Fluid        | BLBIO         | Bronchial lavage fluid with RNAlater for microbiome - See MOP8 4.3.1                   | 25 | 1                | 13500            |
|                            | Bronchial Lavage Fluid        | BLMAC         | Bronchial lavage fluid prepared for alveolar macrophage isolation - See MOP8 4.3.1     | 23 | 1                | 600              |
|                            | Bronchial Lavage Fluid        | BLNP          | Bronchial lavage fluid with no preservative for microbiome - See MOP8 4.3.1            | 23 | 1                | 2000             |
|                            | Bronchial Lavage Supernatant  | BLSUP         | Bronchial lavage supernatant - See MOP8 4.3.1  | 25 | 43               | 1000             |
|                            | Bronchial Wash                | BWBIO         | Bronchial wash with RNAlater for microbiome - See MOP8 4.2                             | 17 | 1                | 13500            |
|                            | Bronchial Wash Cell Pellet    | BWPEL         | Bronchial wash cell pellet - See MOP8 4.2  | 25 | 1                | 600              |
|                            | Bronchial Wash Supernatant    | BWSUP         | Bronchial wash supernatant - See MOP8 4.2  | 25 | 9                | 500              |
|                            | Cytological Brush for DNA     | CBDNA         | Cytological brushes from large airway for DNA methylation/epigenomics - See MOP8 4.4.1 | 22 | 2                | 1500             |
|                            | DNA                           | DN            | DNA extracted from blood lysate (prepared at the sites)                                | 13 | 4                | 225              |
|                            | Large Airway Epithelial Cells | EPRNA         | Epithelial cells from large airway cytological brushings for RNA - See MOP8 4.4.1      | 20 | 1                | 600              |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 3B. SPIROMICS II Bronchoscopy Substudy Biospecimen Inventory Status for Stratum Enrolled 2**

Based on BSP data March 7, 2023

| Visit | Material                      | Material Type | Material Description   | N* | QTY <sup>†</sup> | VOL <sup>‡</sup> |
|-------|-------------------------------|---------------|--|----|------------------|------------------|
|       | Nasal Cells                   | NCELL         | Nasal cells from nasal brushing just prior to bronchoscopy - See MOP8 3.4.5                              | 24 | 2                | --               |
|       | Oral Rinse                    | ORRNS         | Oral rinse before bronchial wash - See MOP8 3.4.6 Step 2   | 25 | 3                | 15000            |
|       | Plasma                        | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant                                      | 25 | 28               | 150              |
|       | Protected Brush               | PROBR         | Protected brush specimens - See MOP8 4.1   | 24 | 3                | --               |
|       | Protected brush in PBS        | PRMUP         | Epithelial cells from large airway cytological brushings for Mucins in PBS - See MOP8 4.4.2              | 20 | 1                | --               |
|       | Protected brush in Urea       | PRMUU         | Epithelial cells from large airway cytological brushings for Mucins in Urea - See MOP8 4.4.2             | 2  | 1                | --               |
|       | Saline                        | BIOSA         | Saline through scope (microbiome control) - See MOP8 3.4.10  | 25 | 1                | 12500            |
|       | Saline                        | SCOSA         | Saline alone (scope control) - See MOP8 3.4.10   | 24 | 1                | 12500            |
|       | Serum                         | SE            | Serum in red top tube with clot activator and no anticoagulant   | 25 | 28               | 150              |
|       | Small Airway Epithelial Cells | OPDNL         | Epithelial cells from optional small airway cytological brushes from left side for DNA - See MOP8 4.4.3  | 10 | 1                | 1500             |
|       | Small Airway Epithelial Cells | OPDNR         | Epithelial cells from optional small airway cytological brushes from right side for DNA - See MOP8 4.4.3 | 8  | 1                | 1500             |
|       | Small Airway Epithelial Cells | OPRNL         | Epithelial cells from optional small airway cytological brushes from left side for RNA - See MOP8 4.4.3  | 11 | 1                | 600              |
|       | Small Airway Epithelial Cells | OPRNR         | Epithelial cells from optional small airway cytological brushes from right side for RNA - See MOP8 4.4.3 | 9  | 1                | 600              |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 3C. SPIROMICS II Bronchoscopy Substudy Biospecimen Inventory Status for Stratum Enrolled 3**

Based on BSP data March 7, 2023

| Visit                      | Material                     | Material Type | Material Description   | N* | QTY <sup>†</sup> | VOL <sup>‡</sup> |
|----------------------------|------------------------------|---------------|--|----|------------------|------------------|
| <b>Pre-Bronchoscopy V1</b> |                              |               |  |    |                  |                  |
|                            | Exhaled Breath Condensate    | EBC           | Exhaled breath condensate (elective procedure)   | 7  | 3                | 420              |
|                            | Sputolysin                   | SLSUP         | Sputolysin/DPBS samples - See MOP5 7.1.5.7   | 11 | 2                | 9400             |
|                            | Sputum                       | CYT           | Sputum aliquots for cytokine analysis - See MOP5 7.1.5.4a                              | 12 | 4                | 1000             |
|                            | Sputum                       | CYTZ          | Sputum aliquots for cytokine analysis mixed with Zymo Shield - See MOP5 7.1.5.4a       | 12 | 1                | 850              |
|                            | Sputum                       | MICZ          | Sputum for microbiology analysis with Zymo Shield- See MOP5 7.1.3                      | 12 | 2                | 200              |
|                            | Sputum                       | MUC           | Whole sputum with guanidine reduction buffer for mucin analysis - See MOP5 7.1.2       | 1  | 1                | --               |
|                            | Sputum                       | NUC           | Sputum aliquots for nucleotide analysis - See MOP5 7.1.5.4a                            | 12 | 4                | 1000             |
|                            | Sputum                       | OSMO          | Sputum for osmotic pressure analysis - See MOP5 7.1.4                                  | 12 | 1                | --               |
|                            | Sputum Cell Pellet           | PEL           | Cell pellet in DPBS and Zymo shield - See MOP5 7.1.8                                   | 11 | 2                | 500              |
| <b>Bronchoscopy V2</b>     |                              |               |  |    |                  |                  |
|                            | Bronchial Lavage Fluid       | BLBIO         | Bronchial lavage fluid with RNAlater for microbiome - See MOP8 4.3.1                   | 21 | 1                | 13500            |
|                            | Bronchial Lavage Fluid       | BLMAC         | Bronchial lavage fluid prepared for alveolar macrophage isolation - See MOP8 4.3.1     | 19 | 1                | 600              |
|                            | Bronchial Lavage Fluid       | BLNP          | Bronchial lavage fluid with no preservative for microbiome - See MOP8 4.3.1            | 21 | 1                | 2000             |
|                            | Bronchial Lavage Supernatant | BLSUP         | Bronchial lavage supernatant - See MOP8 4.3.1  | 21 | 43               | 1000             |
|                            | Bronchial Wash               | BWBIO         | Bronchial wash with RNAlater for microbiome - See MOP8 4.2                             | 10 | 1                | 13500            |
|                            | Bronchial Wash Cell Pellet   | BWPEL         | Bronchial wash cell pellet - See MOP8 4.2  | 17 | 1                | 600              |
|                            | Bronchial Wash Supernatant   | BWSUP         | Bronchial wash supernatant - See MOP8 4.2  | 18 | 9                | 500              |
|                            | Cytological Brush for DNA    | CBDNA         | Cytological brushes from large airway for DNA methylation/epigenomics - See MOP8 4.4.1 | 19 | 2                | 1500             |
|                            | DNA                          | DN            | DNA extracted from blood lysate (prepared at the sites)                                | 10 | 4                | 230              |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 3C. SPIROMICS II Bronchoscopy Substudy Biospecimen Inventory Status for Stratum Enrolled 3**

Based on BSP data March 7, 2023

| Visit | Material                      | Material Type | Material Description   | N* | QTY <sup>†</sup> | VOL <sup>‡</sup> |
|-------|-------------------------------|---------------|--|----|------------------|------------------|
|       | Large Airway Epithelial Cells | EPRNA         | Epithelial cells from large airway cytological brushings for RNA - See MOP8 4.4.1                        | 19 | 1                | 600              |
|       | Nasal Cells                   | NCELL         | Nasal cells from nasal brushing just prior to bronchoscopy - See MOP8 3.4.5                              | 21 | 2                | --               |
|       | Oral Rinse                    | ORRNS         | Oral rinse before bronchial wash - See MOP8 3.4.6 Step 2   | 21 | 3                | 15000            |
|       | Plasma                        | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant                                      | 20 | 28               | 150              |
|       | Protected Brush               | PROBR         | Protected brush specimens - See MOP8 4.1   | 21 | 3                | --               |
|       | Protected brush in PBS        | PRMUP         | Epithelial cells from large airway cytological brushings for Mucins in PBS - See MOP8 4.4.2              | 18 | 1                | --               |
|       | Protected brush in Urea       | PRMUU         | Epithelial cells from large airway cytological brushings for Mucins in Urea - See MOP8 4.4.2             | 1  | 1                | --               |
|       | Saline                        | BIOSA         | Saline through scope (microbiome control) - See MOP8 3.4.10  | 21 | 1                | 12500            |
|       | Saline                        | SCOSA         | Saline alone (scope control) - See MOP8 3.4.10   | 21 | 1                | 12500            |
|       | Serum                         | SE            | Serum in red top tube with clot activator and no anticoagulant   | 20 | 28               | 150              |
|       | Small Airway Epithelial Cells | OPDNL         | Epithelial cells from optional small airway cytological brushes from left side for DNA - See MOP8 4.4.3  | 6  | 1                | 1500             |
|       | Small Airway Epithelial Cells | OPDNR         | Epithelial cells from optional small airway cytological brushes from right side for DNA - See MOP8 4.4.3 | 7  | 1                | 1500             |
|       | Small Airway Epithelial Cells | OPRNL         | Epithelial cells from optional small airway cytological brushes from left side for RNA - See MOP8 4.4.3  | 6  | 1                | 600              |
|       | Small Airway Epithelial Cells | OPRNR         | Epithelial cells from optional small airway cytological brushes from right side for RNA - See MOP8 4.4.3 | 7  | 1                | 600              |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 3D. SPIROMICS II Bronchoscopy Substudy Biospecimen Inventory Status for Stratum Enrolled 4**

Based on BSP data March 7, 2023

| Visit               | Material                      | Material Type | Material Description  | N* | QTY <sup>†</sup> | VOL <sup>‡</sup> |
|---------------------|-------------------------------|---------------|---|----|------------------|------------------|
| Pre-Bronchoscopy V1 |                               |               |   |    |                  |                  |
| Bronchoscopy V2     |                               |               |   |    |                  |                  |
|                     | Bronchial Lavage Fluid        | BLBIO         | Bronchial lavage fluid with RNAlater for microbiome - See MOP8 4.3.1                        | 2  | 1                | 13500            |
|                     | Bronchial Lavage Fluid        | BLMAC         | Bronchial lavage fluid prepared for alveolar macrophage isolation - See MOP8 4.3.1          | 1  | 1                | 600              |
|                     | Bronchial Lavage Fluid        | BLNP          | Bronchial lavage fluid with no preservative for microbiome - See MOP8 4.3.1                 | 1  | 1                | 2000             |
|                     | Bronchial Lavage Supernatant  | BLSUP         | Bronchial lavage supernatant - See MOP8 4.3.1   | 2  | 23               | 1000             |
|                     | Bronchial Wash                | BWBIO         | Bronchial wash with RNAlater for microbiome - See MOP8 4.2                                  | 2  | 1                | 13500            |
|                     | Bronchial Wash Cell Pellet    | BWPEL         | Bronchial wash cell pellet - See MOP8 4.2   | 1  | 1                | 600              |
|                     | Bronchial Wash Supernatant    | BWSUP         | Bronchial wash supernatant - See MOP8 4.2   | 2  | 10               | 500              |
|                     | Cytological Brush for DNA     | CBDNA         | Cytological brushes from large airway for DNA methylation/epigenomics - See MOP8 4.4.1      | 2  | 2                | 1500             |
|                     | Large Airway Epithelial Cells | EPRNA         | Epithelial cells from large airway cytological brushings for RNA - See MOP8 4.4.1           | 1  | 1                | 600              |
|                     | Nasal Cells                   | NCELL         | Nasal cells from nasal brushing just prior to bronchoscopy - See MOP8 3.4.5                 | 2  | 2                | --               |
|                     | Oral Rinse                    | ORRNS         | Oral rinse before bronchial wash - See MOP8 3.4.6 Step 2                                    | 2  | 3                | 15000            |
|                     | Plasma                        | PLLT          | Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant                         | 2  | 28               | 150              |
|                     | Protected Brush               | PROBR         | Protected brush specimens - See MOP8 4.1  | 2  | 3                | --               |
|                     | Protected brush in PBS        | PRMUP         | Epithelial cells from large airway cytological brushings for Mucins in PBS - See MOP8 4.4.2 | 2  | 1                | --               |
|                     | Saline                        | BIOSA         | Saline through scope (microbiome control) - See MOP8 3.4.10                                 | 2  | 1                | 12500            |
|                     | Saline                        | SCOSA         | Saline alone (scope control) - See MOP8 3.4.10  | 2  | 1                | 12500            |
|                     | Serum                         | SE            | Serum in red top tube with clot activator and no anticoagulant                              | 2  | 23               | 150              |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5



**Table 4. SPIROMICS II Exacerbation Substudy Biospecimen Inventory Status for All Stratum**

Based on BSP data March 7, 2023

| Visit                       | Material                  | Material Type | Material Description   | N*       | QTY <sup>†</sup> | VOL <sup>‡</sup> |
|-----------------------------|---------------------------|---------------|--|----------|------------------|------------------|
| <b>Exacerbation Visit 1</b> | <b>Blood</b>              | <b>BL</b>     | <b>Blood in Paxgene RNA tube containing anticoagulant and RNA stabilizers</b>  | <b>1</b> | <b>1</b>         | <b>10000</b>     |
|                             | <b>DNA</b>                | <b>DN</b>     | <b>DNA extracted from blood lysate (prepared at the sites)</b>   | <b>2</b> | <b>4</b>         | <b>240</b>       |
|                             | <b>Nasal Cells</b>        | <b>NCELL</b>  | <b>Nasal swab for RNA and DNA analysis - See MOP9 4.3.1 and Appendix 1</b>   | <b>1</b> | <b>1</b>         | <b>--</b>        |
|                             | <b>Plasma</b>             | <b>PL100</b>  | <b>Plasma in P100 tube with a mechanical separator and sprayed on K2EDTA anti-coagulant, and protein stabilizers</b> | <b>1</b> | <b>14</b>        | <b>150</b>       |
|                             | <b>Plasma</b>             | <b>PLLT</b>   | <b>Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant</b>   | <b>1</b> | <b>28</b>        | <b>150</b>       |
|                             | <b>Serum</b>              | <b>SE</b>     | <b>Serum in red top tube with clot activator and no anticoagulant</b>  | <b>1</b> | <b>28</b>        | <b>150</b>       |
|                             | <b>Sputolysin</b>         | <b>SLSUP</b>  | <b>Sputolysin/DPBS samples - See MOP5 7.1.5.7</b>  | <b>1</b> | <b>1</b>         | <b>3000</b>      |
|                             | <b>Sputum</b>             | <b>CYT</b>    | <b>Sputum aliquots for cytokine analysis - See MOP5 7.1.5.4a</b>   | <b>1</b> | <b>2</b>         | <b>400</b>       |
|                             | <b>Sputum</b>             | <b>CY TZ</b>  | <b>Sputum aliquots for cytokine analysis mixed with Zymo Shield - See MOP5 7.1.5.4a</b>                              | <b>1</b> | <b>1</b>         | <b>400</b>       |
|                             | <b>Sputum</b>             | <b>MICS</b>   | <b>Spontaneous sputum for microbiology analysis - See MOP9 4.3.1 and Appendix 1</b>                                  | <b>1</b> | <b>2</b>         | <b>240</b>       |
|                             | <b>Sputum</b>             | <b>NUC</b>    | <b>Sputum aliquots for nucleotide analysis - See MOP5 7.1.5.4a</b>   | <b>1</b> | <b>2</b>         | <b>400</b>       |
|                             | <b>Sputum Cell Pellet</b> | <b>PEL</b>    | <b>Cell pellet in DPBS and Zymo shield - See MOP5 7.1.8</b>  | <b>1</b> | <b>2</b>         | <b>500</b>       |
|                             | <b>Urine</b>              | <b>UR</b>     | <b>Urine from specimen cup</b>   | <b>1</b> | <b>10</b>        | <b>1000</b>      |
|                             | <b>Urine (Preserved)</b>  | <b>PUR</b>    | <b>Urine with ascorbic acid preservative</b>   | <b>1</b> | <b>10</b>        | <b>1000</b>      |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5

**Table 4C. SPIROMICS II Exacerbation Substudy Biospecimen Inventory Status for Stratum Enrolled 3**

Based on BSP data March 7, 2023

| Visit                       | Material                  | Material Type | Material Description   | N*       | QTY <sup>†</sup> | VOL <sup>‡</sup> |
|-----------------------------|---------------------------|---------------|--|----------|------------------|------------------|
| <b>Exacerbation Visit 1</b> |                           |               |  |          |                  |                  |
|                             | <b>Blood</b>              | <b>BL</b>     | <b>Blood in Paxgene RNA tube containing anticoagulant and RNA stabilizers</b>  | <b>1</b> | <b>1</b>         | <b>10000</b>     |
|                             | <b>DNA</b>                | <b>DN</b>     | <b>DNA extracted from blood lysate (prepared at the sites)</b>   | <b>2</b> | <b>4</b>         | <b>240</b>       |
|                             | <b>Nasal Cells</b>        | <b>NCELL</b>  | <b>Nasal swab for RNA and DNA analysis - See MOP9 4.3.1 and Appendix 1</b>   | <b>1</b> | <b>1</b>         | <b>--</b>        |
|                             | <b>Plasma</b>             | <b>PL100</b>  | <b>Plasma in P100 tube with a mechanical separator and sprayed on K2EDTA anti-coagulant, and protein stabilizers</b> | <b>1</b> | <b>14</b>        | <b>150</b>       |
|                             | <b>Plasma</b>             | <b>PLLT</b>   | <b>Plasma in lavender top tube with a sprayed on K2EDTA anti-coagulant</b>   | <b>1</b> | <b>28</b>        | <b>150</b>       |
|                             | <b>Serum</b>              | <b>SE</b>     | <b>Serum in red top tube with clot activator and no anticoagulant</b>  | <b>1</b> | <b>28</b>        | <b>150</b>       |
|                             | <b>Sputolysin</b>         | <b>SLSUP</b>  | <b>Sputolysin/DPBS samples - See MOP5 7.1.5.7</b>  | <b>1</b> | <b>1</b>         | <b>3000</b>      |
|                             | <b>Sputum</b>             | <b>CYT</b>    | <b>Sputum aliquots for cytokine analysis - See MOP5 7.1.5.4a</b>   | <b>1</b> | <b>2</b>         | <b>400</b>       |
|                             | <b>Sputum</b>             | <b>CYTZ</b>   | <b>Sputum aliquots for cytokine analysis mixed with Zymo Shield - See MOP5 7.1.5.4a</b>                              | <b>1</b> | <b>1</b>         | <b>400</b>       |
|                             | <b>Sputum</b>             | <b>MICS</b>   | <b>Spontaneous sputum for microbiology analysis - See MOP9 4.3.1 and Appendix 1</b>                                  | <b>1</b> | <b>2</b>         | <b>240</b>       |
|                             | <b>Sputum</b>             | <b>NUC</b>    | <b>Sputum aliquots for nucleotide analysis - See MOP5 7.1.5.4a</b>   | <b>1</b> | <b>2</b>         | <b>400</b>       |
|                             | <b>Sputum Cell Pellet</b> | <b>PEL</b>    | <b>Cell pellet in DPBS and Zymo shield - See MOP5 7.1.8</b>  | <b>1</b> | <b>2</b>         | <b>500</b>       |
|                             | <b>Urine</b>              | <b>UR</b>     | <b>Urine from specimen cup</b>   | <b>1</b> | <b>10</b>        | <b>1000</b>      |
|                             | <b>Urine (Preserved)</b>  | <b>PUR</b>    | <b>Urine with ascorbic acid preservative</b>   | <b>1</b> | <b>10</b>        | <b>1000</b>      |

\* = Number of participants with given sample type

† = Median number of samples or aliquots per participant

‡ = Median volume of samples or aliquots; volume is not applicable for some material types that are whole samples

\*\* = Participants with the given sample type available in V1 V2 V4 V5 is a subset of that available in V1 V5