Worklist: 2578

| LAB CASE | ITEM | TASK ID | DESCRIPTION |
| :---: | :---: | :---: | :---: |
| C2018-1231 | 2 | 119677 | AM 25/AM 26 Blood MultiDrug/THC Screen by Li |
| C2018-1243 | 1 | 119776 | AM 25/AM 26 Blood MultiDrug/THC Screen by Li |
| C2018-1286 | 1 | 120471 | AM 25/AM 26 Blood MultiDrug/THC Screen by L' |
| C2018-1287 | 1 | 120473 | AM 25/AM 26 Blood MultiDrug/THC Screen by LI |
| C2018-1299 | 1 | 120553 | AM 25/AM 26 Blood MultiDrug/THC Screen by LI |
| C2018-1300 | 1 | 120556 | AM 25/AM 26 Blood MultiDrug/THC Screen by Li |
| C2018-1305 | 1 | 120701 | AM 25/AM 26 Blood MultiDrug/THC Screen by Li |
| C2018-1318 | 1 | 120800 | AM 25/AM 26 Blood MultiDrug/THC Screen by L( |
| C2018-1328 | 1 | 120886 | AM 25/AM 26 Blood MultiDrug/THC Screen by Li |
| C2018-1329 | 1 | 120889 | AM 25/AM 26 Blood MultiDrug/THC Screen by Ls |
| C2018-1335 | 1 | 120898 | AM 25/AM 26 Blood MultiDrug/THC Screen by Li |
| C2018-1339 | 2 | 120905 | AM 25/AM 26 Blood MultiDrug/THC Screen by Li |
| C2018-1361 | 1 | 121056 | AM 25/AM 26 Blood MultiDrug/THC Screen by Li |
| C2018-1383 | 1 | 121201 | AM 25/AM 26 Blood MultiDrug/THC Screen by Li |




## AM\＃25：Multi－Drug Screen in Blood by LC－MS／MS

Extraction Date： $7-17-18$ Analyst：AnNe Nord
Plate lot\＃： $0515207 \quad$ Plate Expiration：10／18／2018

Mobile phase A： 10 mM Amm Form
0．5M Ammonium Hydroxide
Blank Blood Lot：17J20718
LCMS－QQQ ID： 62340

Mobile phase B： $0.1 \%$ Formic Acid in MeOH
Ethyl Acetate LC Methanol
Column：Phenomenex Phenyl Hexyl（4．6x50mm，2．6um）

Pre－Analytic：
© 1．Check levels of mobile phases and needle wash refill as needed．Ensure waste is not full．
$\otimes 2$ ．Ensure correct column is installed and begin mobile phase flow allow to equilibrate $\sim 30$ minutes．
3．Create worklist：

## Analytic：

1．Remove standards，plate，controls，and samples from cold storage．Allow to reach room temperature．
$\boxtimes$ 2．Pipette $250 \boldsymbol{\mu}$ L blood（calibrated pipette）Pipette ID： 1926134 in wells of analytical（standards）plate．
X 3．Place on shaking incubator at ambient temp．，900rpm for 15 minutes．Shaker ID： 66759
（x）Pipette $\mathbf{2 5 0} \boldsymbol{\mu} \mathrm{L} \mathbf{0 0 . 5 M}$ ammonium hydroxide in wells of analytical plate．
（ 5．Place on shaking incubator at ambient temp．， 900 rpm for 15 minutes．
6．Transfer $\mathbf{3 0 0 \mu L}$ of blood＋base mixture to corresponding wells of SLE＋plate．
且 7．Apply positive pressure for approx．10－15 seconds（or until no liquid remains on top of sorbent）．
（Load at 85－100 PSI－Selector to the right）Manifold ID： 66792
X 8．Wait 5 minutes．
9．Add 900uL ethyl acetate．
10．Wait 5 minutes．
® 11．Apply positive pressure for approx． 15 seconds．（10－15 PSI－Selector to the left）．
（2．Add 900 uL ethyl acetate．
区 13．Wait 5 minutes．
（ 14．Apply positive pressure for approx． 15 seconds．（10－15 PSI－Selector to the left）．
15．Remove plate containing eluate．Place on SPE Dry and evaporate to dryness at approx． $35^{\circ} \mathrm{C}$ ． SPE Dry ID： 6681916．Reconstitute in $\mathbf{1 0 0} \boldsymbol{\mu} \mathrm{L} \mathbf{1 0 0} \mathbf{\%} \mathbf{L C ~ M e O H}$ and heat seal plate with foil．Place in autosampler and run worklist．

## Post－Analytic

1．Open quantitation software and create a new quantitation batch．Mds pl Batch Name： 071718 AM 25－26 Worklist path：mds p
$\boxed{\square}$ 2．Make necessary changes to integration limits
$\boxtimes 3$ ．Evaluate samples， $\mathrm{S} / \mathrm{N}$ of primary transition $>5$ and $\mathrm{S} / \mathrm{N}$ of secondary transition $>3$ or evaluation of peak symmetry and resolution．Within $+/-2 \%$ or 0.1 min RT of administrative control．$>1 / 3$ the response of administrative control．
4．Did all QCs pass for each analyte？（Y）／N
因 5．Central File Packet to include：LIMS Worklist，Method Checklist，Calibration and Control Reports

## COMMENTS：




| 8TLOZTLT 1 O｜poolq Bəu |  <br>  |  |  |
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|  | 0ZOZ／T／E | TOSI80TON」 | әи！｜едұая |
|  | 0ZOZ／T／8 | EOSI6T90N」 | әu！｜\ıd！йои |
|  | OZOZ／T／6 | SOST6060ヨ | әиороэолр $\wedge_{\mathrm{H}}$ |
|  | 0ZOZ／T／9 | 20St0tto y | әuoydıomoıp $\mathrm{H}_{\mathrm{H}}$ |
|  | uo！qe！！dxa | 101 | Ina |
|  <br>  <br>  <br>  |  |  |  |
|  |  |  |  | Toxicology AM method 25 external prep information working solution $10000 \mathrm{ng} / \mathrm{ml}$ in meoh Hydromorphone，Hydrocodone，Nortriptyline，Sertraline

Ppd 4／23／18 Exp：4／23／19 lot 42318 by Amn

Stock solution $1 \mathrm{mg} / \mathrm{ml} 100$ ul each in 9600 ul meOH

by Amn

| $8588 \angle E$ | 26s＇t | $\cdots 88<-Z \bigcirc 0 \varepsilon$ | EG－auoudjoukxO | 0LS91 | 0L928 | LZZ＜－1＇ZOE | E9＇18 | S181L | ｜7S9＇t | $\forall 10: 1 \mathrm{~L}$ 8LOZ／LL／L |  | әuoudioukxO |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 911698 | 66て＇9 | － 0 ¢く－ででも | 90－2uopozk×O | 9LE61 | カヤヤを | レセてく－で91を | 99．99 | 106259 | 198．${ }^{\text {¢ }}$ | $\forall$ LO：LI 8LOZILLIL | $86 Z<-Z 91 \varepsilon$ | әuороэk× |
| E099EL | 988．9 | $9 \triangleright$＜－1でてZ | so－urdazexo | EZLOL | 20.01 | $892<-1 \angle 82$ | Ot＇zO1 | 680zz | 988＇9 | $\forall$ LO：LI 8LOZ／LLIL | $0 \square Z<-1 \cdot \angle 8 Z$ | medazexo |
| Zt901 | L00＇s | どャ9＜－で9Sて | －орешeम－1イч｜әusəp－O | Et901 | 76．1 | どでく＜で0GZ | 0L9LS | St601Z | LZO＇G | $\forall 10: 118$ 8LOZ／LL／L | $\varepsilon \cdot 8 \mathrm{~S}<-$ で0 S | 1орешей－Кирәшsәр－о |
| 万698L1 | 9 266 | $\angle 8 Z<-Z$ S0E | عव－əUOPOJKXOION | カャてい | L8®S | 981＜－1＇Z0E | S9＇もE | 198LOE | $866^{\circ} \downarrow$ | $\forall 10: 11810 Z / L L / L$ | $\square 8 Z<-1 / 20 \varepsilon$ | auopojkxoron |
| 2カロ8L | 280＇s | て02＜－で682 | $\varepsilon \square$－әиороכOıрイч1ON | レーL | K！！ | $1 \angle 1<-て ゙ 982$ | K！u！u！ | 6892 | EOL｀S | $\forall 10: 1188102 / L L / L$ | 661＜－て＇982 | әиороэолрイцION |
| 91E9ZL |  | て＇ヤ8＜－で8\＆て | GG－1イuetuəut | 96LLS | SE $\angle 5$ | $\varepsilon \varsigma \subseteq<-乙$ ¢ $¢ \Sigma$ | 1L1LOZ | SOZカロ｜ | 1sEtS | $\forall 10: 118102 / L L / L$ | でャ8＜－でと¢Z |  |
| 29196 | ZLS．9 |  | Ga－uredeze！pion | 298L1 | SS6089 | $802<-1 / L L$ | 99 S21 | 10t0sz | ELS＇9 | $\forall 10: 1+8102 / L L / L$ | 0カレく－1！Lく | uedəze！pion |
| －660E | 6209 | LOL＜－ع L 4 ¢ | ع0－əu！पd．ıouəıdnqıon | 6999 | カカワレ | $\varepsilon \angle S \ll$ ¢カレt | 1と88 | SELS | 620＇9 |  |  | 2u！udiouridnqion |
| 0097 | $\angle \angle 9{ }^{\circ} \mathrm{t}$ | ZSL＜－でZ6Z | 90－əu！${ }^{\text {a }}$ | 9098 | $68^{\circ}$ | ¢91＜－で982 | LS 811 | IZ9bs | 6SL＇t | $\forall$ LO：LI 810ZILL／L | ＂10Z＜－で98Z | au！udiow |
| L－6E01 | LLLOS | 1． $26<-て ゙ 191$ | 1LO－əu！uejądueцteN | SZ9Z9 | 7800 | 611＜－1091 | ｜x！u！ | 600891 | ZELS | $\forall 100158102 / L L / L$ | $1.16<-1.091$ | शәudueपfəW |
| C66EL | E09＇9 | $892<-\varepsilon 61 \varepsilon$ | 60－әuорецІәW | LLZZ | Zと6661 | SOL＜－でOLE | 01．1カ9｜ | －$\llcorner$ LZLEZ | b09＇9 | $\forall$ LO：LL 8L0Z／LL／L | G9Z＜－Z＇018 | әиорецıәW |
| So9etl | 6659 | c91＜－で92Z | LO－əjeweqordew | GLZOZ | EL＇Sb | 1 $26<-1.612$ | Z $2 \angle \square \square$ | とZ9\＆Z | 665＇s | $\forall$ LO：LL 8LOZ／LL／L | $891<-1.612$ | jueurgordaw |
| SCZS1 | 765：S | £ 85＜－で892 | عロ－o¢l－lopemerı | 0L90L | ZS $68 \downarrow$ | $7 \angle L<-て ゙ 66 \varepsilon$ | 29＊ 0 ¢G | ¢¢66Z | 869＇9 | $\forall$ L0：LI 8L0Z／LLIL | $8 \varepsilon Z<-Z 66 \varepsilon$ | au！uイ6en！ |
| SZZS1 | $769^{\circ} \mathrm{S}$ | \＆ $8 \mathrm{~S}<-2.892$ | عO－oEl－opeweı 1 | 1＜91 | Stiz8Z | $\varepsilon て L<-z .992$ | Lでもても | 162Lヤて | bSc＇9 | $\forall 10: 118102 / L L / L$ | G61＜－Z＇992 | auldezeれ！ |
| 88をカレS | 6919 | $6 Z 1<-1 \times \downarrow$－ |  | EヵS68 | 108 $\angle 1$ | －0ZZ＜－1．8\＆Z |  | SZ8L01 | 0L1＇9 | $\forall 10 \cdot 118102 / L L / L$ | GZL＜－1．8\＆Z | әu！шeray |
| 6 6SZ6 | $686 \%$ | S81＜－でて6Z | 90－əu0पdлomospरH | 16681 | L1．91 | LSL＜－で982 | 18 ¢9 | 0ヵZらZ | ZZO＇G | $\forall$ L0：L1 810Z／LL／L | ャ8L＜－て＇982 | 2uoyd．oworpKH |
| 0sZg | 18099 | て0Z＜－で90¢ | 90－əuoposoıp／H | $\square \angle L 61$ | K！ | 8 くL＜－で00¢ | 80． 15 | 6800t | LL9＇S | $\forall 10: 11810 Z / L L / L$ | $861<-て ゙ 00 \varepsilon$ | әuорого1p $\mathrm{K}_{\mathrm{H}}$ |
| ZSLSL | 10t＇9 | どカャ＜－で91を | 90－əu！ | 1886 | 8ZS 9 | $8 \mathrm{tL}<-1.018$ | Eて＇100Z | 1901008 | 180t9 | $\forall$ LO：LL 810ZILLIL | どtt＜－1．018 | әu！texon！ |
| 己\＆S81 | 1899 | SOL＜－¢ こ ¢ ¢ | SO－Kuenuey | てヤ0¢乙 | 10289 | $881<-て ゙ \angle \varepsilon \varepsilon$ | SLOO | 6661E | 189.9 | $\checkmark 10: 158102 / L L / L$ | SOL＜－でく\＆์ | ｜Kuetue」 |
| 0＜6ヤ8 | 891．9 | S\＆Z＜－でて8Z | E0－d003 | S0S8t | 61．L | 0SZ＜－で6LZ | LLしゃて9 | 18899L1 | 891．9 | $\forall 10: 118102 / L L / L$ | SEZ＜－で6LZ | d003 |
| 92991． | 8189 | $\angle 81<-て ゙ 9 \angle Z$ | SG－əu！ue｜kxog | 8761 | リZ 612 | L91＜－で1LZ | 619 ${ }^{\text {ct }}$ | SLOOLZ | 618＇9 | $\forall 10: 15$ 8L0Z／LLIL | Z81く－でしLZ | 2u！uel／रxod |
| 68L61 | 602＇9 | L91＜－で6S | हव－əи！шеррイииәчd！口 | bSLEL | 81．$\downarrow$ 991 | ZSL＜－で9SZ | 90．88z | 8ع1862 | 6てZ＇9 | $\forall 10: L 1810 Z / L L / L$ | L91＜－で9GZ |  |
| 6806 Sl | L60＇s | て0て＜－で80¢ | 90－әи！әроэоирイч！0 | 802L1 | $198 . \downarrow 2$ | $8 て 1<$ でて0\＆ | 1で0L | ＜8t9 | 091．S | $\forall 10: 118102 / L L / L$ | 861＜－でて0¢ | әu！әроэоıрイи！0 |
| 960 212 | 101L9 | $861<-1.062$ | SO－medaze！口 | 895t62 | L88 509 | ESL＜－1．98Z | LĖZO1 | 8tLSt | 11L9 | $\forall 10: L 1$ 8L0ZILLIL | 861＜－1．982 | medaze！ |
| 乙ع6082 | GLSG | LSL＜－で192 | عG－ueydionixad | 87908 | 18691 | と¢L＜－で8Sて | 9ヤ68S | StてSt | SLS＇G | $\forall 10.118102 / L L / L$ | LSL＜－で8SZ | ueपdionxad |
| と6¢ $\angle \square ¢$ | 8829 | $1 \angle L<-て ゙ S \angle Z$ |  | L91ヵS | LZCSE｜ | くカレく－でてLて | とで118 | 18089 | 882＇9 | $\checkmark 10: 118$ 10Z／LL／L | $1 \angle 1<-て ゙ Z L Z ~$ | ueपdıоч！əmonxə |
| tS68L9 | 1LC99 | GLZ＜－で6LZ | عव－əu！ 1 dezuәqojos | L60LE | －カカ801 | ＂1\＆Z＜－で9Lて | LでZ8S1 | bs ${ }^{\text {b }}$－ | 269＇9 | $\forall 10: 118102 / L L / L$ | カレてく－で9Lて |  |
| t90tc | EOtis | $812<-て 908$ | 90－əu！əроつ | Z0L8 | LヵてS | S91＜－で00E | ZS SZ1 | ヤ826 | 997G | $\forall 10: 118102 / L L / L$ | SLZ＜－で00E | әи！әро才 |
| 6ヵてSt | 6189 | $\angle L Z<1008$ | $\square$－－wedəzeuolo | 260L | $17 G 88$ | を12＜－1918 | 10066 | 99L9Z | 0ヵを9 | $\checkmark$ L0：11 8102ILL／L | $692<-1918$ | uedəzeuolo |
| 78801 | 961．9 | $601<-て ゙ 1 \varepsilon \varepsilon$ | 90－weddolet！ | ZZOLt | 80 ZLE8 | Z9Zく－でらZ\＆ | 08＊と¢ | 289802 | 91で9 | $\forall 10: 1 / 8102 / L L / L$ | 601＜－でGZE | medojet！o |
| ZLTELS | 921．9 | E8L＜－で892 | La－lopoudosilej | 69008 | SL． 98 | と＇sc＜－で19Z | てZ＇8\＆์ | EOSOL | LZ19 | V LO：LI 810ZILLIL | $9 \angle 1<-て ゙ 192$ | lopondos！ue |
| 8ZOSLt | 691．9 | C81＜－260ち | 60－uoldo．dng | SL6Et | 19 SE | － $181<-100 \square$ |  | $8 \uparrow 898$ | 101で9 | －LO：L1 810ZILLLL | 781＜－1．0t2 | uoidordng |
| LZL968 | 7L8 ${ }^{\circ}$ | S81＜－で $20 \varepsilon$ | ع0－əu！e＞o | LZL9t | 98＇SL | GOL＜－でヤOE | ｜79．002 | 618081 | S68＇s | －LO：LI 8L0ZILLIL | て8L＜－でヤ0\＆ | әu！ejoj |
| －ZL06 | 068 ＇ | $0 \varepsilon 1<-て ゙ \angle け L$ | ILG－әu！ | 8LLOt | 18.22 | $611<-1.981$ | 7801 | 0عE\＆LL | 1867 | $\forall$ LO：LI 8L0ZILLIL | $1 \cdot 16<-1.981$ | әu！ |
| LE6892 | ヤ8＞9 | 98て＜－1゙ヤレを | Sa－mejozexdiv | 9L009 | 60Z18 | G02＜－1．608 | 109 28001 | 18LL09 | 98t9 | $\checkmark$ LO：LI 8L0ZILLIL | $182<-1608$ | mejozeddy |
| 9999 19 | 706 S | 1－16く－で0カて | $8 \mathrm{p}-\mathrm{d} \wedge$ d－eudje | LELSD | H．EZ | 1．LL＜＜－でてとて | 25＇66 | 1－26LEL | L86．9 | $\checkmark$ 10：L1 8LOZILLIL | 0．16＜－でてとて | $d \wedge d$－eydje |
| 0t6es | $6 \angle 89$ | Z0¢＜－1．08E | GO－mejoze．dje人xoup＜u－e | L887 | L6GL | SLZ＜－1＇SZE | LL＇601 | SIL8 | 100t9 | $\checkmark$ 10：LI 8L0Z／LL／L | L6Z＜－1－9ZE | wejozeddjekxoup／4－e |
| 7698L1 | 9 46 | $\angle 8 Z<-て ゙ 50 \varepsilon$ | Ea－auopozkxolon | Eع0力て | とでてZ812 | ど9s＜－で892 | 切 $\angle 1 \angle t$ | S91L2 | Ess＇s | $\checkmark$ LO：LL 8L0ZILLIL | 911＜－2．892 | Iopordotaw |
| $6 \pm 6 \mathrm{~S}$ | toc＇s | －$L$ L＜－で86Z | 80－əu！uoбうว｜Kozuəg | 9Z801 | 99でて | S01＜－1．062 | LナーOZL | t0091 | S08S | $\checkmark$ LO：LL 8L0ZILLIL | $891 \ll 1.062$ |  |
| E80tS 1 | LOS＇s | LZL＜－1．062 | to－uredəzeuopou！u $\forall$－L | 08L0Z | 80．028 | ZZZ＜－1．982 | $8 \varepsilon^{\circ} \mathrm{E}$ ¢ | E92LZ | 6299 | $\forall 10: 1181021 L L I L$ | LZL＜－1．982 | uedazeuopou！ue－L |
| 96299 | OZヤTS | S91＜－でも\＆ | 90－W＊W－9 | SZS1 | L2\％ | －12くで8Zを | 08\％ | SSL | $1+\square$ | $\forall 10: 118102021 L 1 / 2$ | 991＜－で82E | WVW－9 |
| －dsoy | 14 | uonlsues 1 | amen | eary | N／S | uontsuell | N／S | dsay | 14 | әu！ | uon！sued 1 | amen |
| sunsey disi |  | poyme QLSI |  | sunsay L dey！eno |  | －W L dalueno | sunsey ez－l jes Id |  |  | ez－1 1eo 10 | poulaw punoduos |  |



| LZ6E6E | 26s＇ャ | $\angle 8 Z<-て$ COE | EO－əuoydıoukxo |  |  | －$\angle 2 Z<-1 \cdot 20 \varepsilon$ |  |  |  | W O OZLL 810ZILL／L | － 78 ＜－1＇20ع | әuoydioukxo |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8ELZ88 | 6629 | ヤ0\＆＜－でてZを | 90－әиороэK×O |  |  | レロてく－2．91E |  |  |  |  | 86て＜－で918 | әuopookxo |  |
| 106991 | S8E＇9 | 9ヵて＜－1＇Z6Z | G0－uedəzexo |  |  | 892＜－1＇282 |  |  |  |  | 0tて＜－1＇L8Z | uedazexo |  |
| 8SZLL | L00＇g | と＇t9＜－z＇992 | －－－орешеп－Ікиәшsәр－О |  |  |  |  |  |  | W＊0z：Lレ8L0z／LLIL | と＇8S＜－で0¢Z |  |  |
| LZ9761 | 1926 ${ }^{\circ}$ | L8Z＜－でG0\＆ | عО－әuopojxxoion |  |  | －98L＜－1＇20¢ |  |  |  | W OZ：LL 8L0ZILLIL | － 8 ¢＜－1＇20¢ | auopojkxoion |  |
| ع986L | 280＇s | て02＜－で68Z | عव－әuopozoupKuson |  |  | ＂レLL＜－で982 |  |  |  | W 0 0Z：L1 810ZILLIL | 661＜－で98て | әиороכ0ıpイपion |  |
| 0669SL | DEtS | でャ8＜－で8とて | Sa－Kueluəıon |  |  | $\varepsilon \varsigma \subseteq<-て ゙ \varepsilon \varepsilon Z$ |  |  |  | W $\forall$ 0Z：11 810ZILLL | でヤ8＜－でと¢ | 1Kuezuerion |  |
| 8t8601 | ZLS9 | 0カL＜－L＇9LZ | SG－Uedəze！pion |  |  | $80 Z<-1 / L 2$ |  |  |  | W＊0Z：11 8L0ZILLIL | 0カL＜－1＇LL | medaze！pion |  |
| 8LLLE | 6009 | ＂＇ㄴoL＜－$¢ \angle L D$ | ह0－əu！̣dıouərdnqıoN |  |  |  |  |  |  |  | ＂101＜－どカレカ | au！ |  |
| St6E | LL9＇t | ZSL＜－でZ6Z | 90－2uludiow |  |  | c91＜－Z．982 |  |  |  | W甘 0Z：LL 8L0ZILLIL | －102＜－2．982 | autudiow |  |
| ¢896EL | 1LOG | 1． $26<-$ て＇191 |  | 086tt | tて＇sz | 6LL＜－1．09L | イप｜u！u | $\angle t 66 t 1$ | ESL＇G | W＊0Z：レレ 8L0Z／LLIL | 1．16＜－1．0SL |  |  |
| ＂＇0esc | E0s＇9 | ＂ $892<-\varepsilon$＇61 $\varepsilon$ | 6व－әиорецıәW |  |  | SOL＜－ZOLE |  |  |  | W＊0Z：レレ 810ZILLIL | ＇ $99 Z<-て ゙ 01 \varepsilon$ | әиоречıәW |  |
| 066t91 | 669 9 | 991＜－ 29.92 | LO－əjeweqoidəW |  |  | 1： $26<-1.6 L Z$ |  |  |  | WV0Z：1L 8L0Z／LL／L | ＂891＜－1．6L2 | әৃеueqoidan |  |
| ZLLSL | 76S＇9 | ع＇8S＜－て＇892 | ع0－0¢L－ореше 1 |  |  | $\square \angle L<-て ゙ 668$ |  |  |  | W＊0Z：11 810ZILLIL | $8 \varepsilon 乙<-て 66 \varepsilon$ | әu！uरбепи！ |  |
| ZLLSL | t6S＇s | ¢＇8s＜－て＇892 | $\varepsilon \square-0 \varepsilon 1-$ opeme $\perp$ |  |  | と＇ZL＜－で992 |  |  |  | W＊0Z：LI 8LOZ／LLIL | S61＜－で992 | әu！dezeमilw |  |
| EZ96SS | 691.9 | 6ZL＜－1．Zって | t0－əu！uerəy |  |  | $02 Z<-1.8 \varepsilon 乙$ |  |  |  | W 0 0Z：LL 8LOZILLIL | SZL＜－1＇8\＆ | әu！wetəy |  |
| 09ttb | 686 ＇t | 981＜－で262 | 9（－auoudiomosp／H |  |  | LSL＜－で982 |  |  |  | WV0Z：LL 8L0ZILLIL | ち8L＜－で982 | әuouddomoup 人 $^{\text {H }}$ |  |
| ZZSLLZ | 809＇9 | て0Z＜－て $90 \varepsilon$ | 90－әuoposo．fpरH |  |  | ＂＇8ZL＜－で00\＆ |  |  |  | W甘 0Z：1L 8LOZILLIL | －861＜－で00\＆ | әuoposoıp久H |  |
| $\cdots \square 7 \angle 91$ | 10t＇9 | どカt＜－で91を | 90－əu！̣əxon！」 |  |  | ＂8tl＜－1．018 |  |  |  | W甘0Z：L1 8LOZILLIL | どヤヤく－1018 | วu！̣әxon！ |  |
| T $\angle$ S6L | 1899 |  | Sa－IKueyuaj |  |  | $881<-Z<\varepsilon \varepsilon$ |  |  |  | WV0Z：11810Z／LL／L | GOL＜－で $2 \varepsilon \varepsilon$ | 1Kuetura |  |
| 9100LL | ¢91＇9 |  | ع0－d00ヨ |  |  | OGZ＜－で6LZ |  |  |  | W甘 0Z：LI 8LOZ／LLIL | GEZ＜－Z＇6LZ | da0ヨ |  |
| ELISL | 818．9 | －$\angle 81<-$－ $9 \angle 2$ | S0－əu！we｜Kxog |  |  | ＂$\angle 91<-Z ゙ L \angle Z$ |  |  |  | W甘 0Z：LI 8LOZ／LLIL | て81＜－でしLて | әu！uel／kog |  |
| とャ¢0Z | 60 己9 | $\angle 91<-て 692$ | $\varepsilon \square$－әu！шe»pイциәиव！ |  |  | ZS1＜－で992 |  |  |  | W＊OZ：L1 8LOZILLIL | L91＜－Z．9SZ | әu！werpर̌uәud！o |  |
| 006991 | L60＇s | Z0Z＜－て80E | 90－әu！әрозоирイи！व |  |  | 8 く1＜－でて0を |  |  |  | WV OZ：LI 8LOZILLIL | 861 く－でて0\＆ | әи！әроэоıрイч！व |  |
| SIEStZ | 01＜9 | $861<-1062$ | G0－uedəze！a |  |  | ESL＜－1．982 |  |  |  | WV 0Z：L1 8LOZILLIL | と61＜－1゙982 | uedəze！ |  |
| $69566 Z$ | SLS＇S | LSL＜－て＇192 | ع0－иечdıопхә］ |  |  |  |  |  |  | WV OZ：11 8LOZILLIL | LSL＜－で8SZ | ueydıonxad |  |
| 乙ع8tSE | 882＇9 | － $1 \angle 1<-て ゙ G \angle Z$ |  |  |  | くカレ＜－でてLZ |  |  |  | WV 0Z：11 810Z／LL／L | $1 \angle 1<$ くでてLZ | иецd．ıидәшоихә］ |  |
| 8000ZL | LLS＇9 | SLZ＜－で6LZ | عG－əu！dezueqoio久o |  |  | －1EZ＜－で9LZ |  |  |  | Wも 0Z：11 810ZILLIL | カレてく－で9くて | әu！çezueqopóo |  |
| LEटtS | 80t $\square^{\text {S }}$ | －8LZ＜－で908 | 90－әu！epo |  |  | ¢91＜－で008 |  |  |  | W＊0Z：L1 810ZILLIL | SLZ＜－で00\＆ | әu！əроО |  |
| L66tr | 6189 | －$\angle 12<-1.02 \varepsilon$ | t0－wedazeuolo |  |  | とLZ＜－1．918 |  |  |  | W＊0z：LI 8LOZ／LL／L | 692＜－1．918 | medəzeuolo |  |
| ＂と8LL | 961＇9 | 601＜－Z゙1尬 | 90－uendoje！ |  |  | て9Z＜－でSZを |  |  |  | W OZ：II 8LOZILI／L | 601＜－でらZを | meddolet！ |  |
| L8t6tG | 92L＇9 | ＂と8L＜－で892 | La－lopordos！e］ |  |  |  |  |  |  |  | 9L1＜－で192 | ｜opordosuej |  |
| 9999L9 | 691.9 | 981＜－Z 6 ¢ | 60－uoidoddng |  |  |  |  |  |  | WV OZ：11 810ZILLIL | ャ81＜－1．0ャて | uoldoidng |  |
| LSE8L6 | $7 \angle 8 \mathrm{G}$ | G8L＜－Z $20 \varepsilon$ | 80－au！ejoj |  |  | －SOL＜－でキ0E |  |  |  | Wも0Z：11 810ZILLIL | Z8L＜－でヤ0\＆ | 2u！ejos |  |
| GLZLOL | $068{ }^{\circ} \mathrm{t}$ | 0とLく－でしカ1 | ILG－əu！ |  |  | $611<-1.981$ | 79 S | ｜L2L60 | $1186 *$ | W＊0Z：11 810ZIL1／L | $1 \cdot 16<-1981$ | әu！ueroydur |  |
| 76\＆Z6Z | ¢8t 9 | 98Z＜－L＇ャ1 | Sa－mejozeddit |  |  | 902＜－1．608 |  |  |  | W＊0Z：11 810ZILLIL | 182＜－1．608 | urejozeddy |  |
| でロ00tL | t06＇G | 1＇16く－で0ちて | $8 \mathrm{p}-\mathrm{d} \wedge \mathrm{d}^{\text {－eydje }}$ |  |  | 1＇LL＜＜でてとて |  |  |  | W＊OZ：11 810Z／LI／L | 0．16＜－でてとZ | d／d－eydje |  |
| StZSS | $6 \angle \varepsilon$＇9 | Z0¢＜－108¢ | SG－wejozeddekxoupKy－e |  |  | GLZ＜－1．9ZE |  |  |  | W ${ }^{\text {W OZ：IL } 810 Z / L 1 / L ~}$ | － 6 L＜－1．9ZE |  |  |
| LZ976L | 926＇t | ＂$\angle 8 Z<-乙$ ¢ $0 \varepsilon$ | عО－әиороכKхоло |  |  | と9¢く－で892 |  |  |  | WV0Z：IL 8L0ZILL／L | 911＜－で892 | Iolordotan |  |
| 2699 | ヤ8でG | ＂ $1 \angle L<-て ゙ 862$ | 80－əu！ |  |  | S01＜－1．062 |  |  |  | WV0Z：L1 8LOZ／LL／L | $891<-1062$ | əu！uoถ̃วข｜Kozuәa |  |
| G66ELL | LOS＇s | －LZL＜－1．06Z | to－medəzeuopou！$\downarrow$－ |  |  | て22＜－1982 |  |  |  | W ${ }^{\text {O OZ：11 810Z／LL／L }}$ | $\cdots$＂LCL＜－1．98Z | wedəzeuopou！ue－L |  |
| 96989 | OZtS | 991＜－でも | 90－WVW－9 |  |  | －1L＜＜て8て\＆ |  |  |  | WV 0Z：L1 8LOZILLIL | 991＜－Z 888 | W甘W－9 |  |
| ＇dsey | 14 | uonisued | əuen | Ean | N／S | uo！nsueı 1 | N／S | －dsay | 14 | วu！ 1 －oteg bov | uonisuel | awen |  |
| Stunsay | OLSI |  | NOYPW GISI | 811 | 9yleno | $\cdots$ W 1 dameno | Sınsay | Onuoo ən！ | eboupd | jonuos an！ebaund |  | W punoduos |  |


| $\cdots$＂ELロGL | ことが9 | ＂$\subseteq$ ¢ \ll－乙＇カレヒ | 90－uәр！d｜oZ |  |  | ＂と9Z＜乙 $20 \varepsilon$ |  |  |  | WV OZ：LL 8LOZ／LL／L | SEZ＜－で80E | Uepldioz |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 869カレ | 6169 | と＇ャ9＜－でゅ৪て | 90－әu！xejejuəへ |  |  | ＂092＜－で8LZ |  |  |  | W＊OZ：LL 8LOZILLIL | を8S＜－で8Lて | әulxejejuan |  |
| 9ヤ8EL | E98＇9 | て81＜－で8LE | 90－əuopoze」1 |  |  | ＂8tL＜－でてL\＆ |  |  |  | W＊OZ：L1 810Z／LLIL | －9L1＜－でZLE | əuopozeı1 |  |
| ZLLSL | 769＇9 | と＇89＜－で89Z |  |  |  | どとt＜－でャ9Z |  |  |  | WV OZ：1L 810ZILLIL | ど8S＜－でも9て | ｜opeme．1 |  |
| 91ヵ99s | LZS＇9 | ＂09Z＜－L＇90\＆ | 90－uedəzeuəl |  |  | － $882<-110 \varepsilon$ |  |  |  | W＊0Z：11 810Z／LL／L | CSC＜－1．108 | uedəzemol |  |
| 966S8E | 82L｀9 | ＂ $9 \angle Z<-1.60 \varepsilon$ |  |  |  | $\cdots$ |  |  |  | W＊OZ゙11 8LOZILLIL | $891<1.908$ | ขu！entas |  |
| 6L6LZ | $669^{\circ} 9$ | ＂9Zて＜－でて6\＆ | 80－əu！de！！əno |  |  | ＂レてく＜－でャ8を |  |  |  | WV0Z゙レL 810Z／LL／L | をGZ＜－てヤ88 | au！de！peno |  |
| ＂0920E | L699 | で68＜－で88て | عa－əu！zeपtәш0．d |  |  | $\varepsilon \cdot 1 \angle<-1.982$ |  |  |  | W＊0Z：11810Z／LL／L | て＇98＜－1．982 | əu！zeцtemodd |  |
| 6L6L0E | ELでS | て＇96＜－でS91 | Sa－əu！unepuerd |  |  | －$\varepsilon$ L＜－LOSL | 791． | G0992 | ESL＇S | W＊0Z：LL 8LOZ／LL／L | て＇99＜－LO91 | әu！uıəıu＊ัd |  |
| －dsoy | 18 | uontsuels | amen | eary | N／S | uomisuex 1 | N／S | dsoy | 18 | oull－zted boy | Uomisuel 1 | amen |  |
| sansey GLSI |  | POuleW OLS |  | … 1 I Ie！！！eno |  | $\cdots W L$ 1ameno | synsəy jonuos әa！！ebəu！d |  |  |  | poulow punoduoj |  |  |



| 6£\＆ 0 ¢ | とてかけ |  | to－euopidoz | 192てL | 80 18 | 912＜－1．68\＆ | ャでで\＆ | $60 Z 12$ | とです | ＂－ |  | əuolotdoz |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $681 \angle 18$ | LてZ＇9 | 0ちて＜－で018 | ta－uoldelez | LLtES | 七¢ $9 \angle \varepsilon$ | ャ9Z＜－1－908 | 01．909 | 9LZEL | LCて 9 | LI：LI 810ZILL／L | $98 乙<1.90 \varepsilon$ | uoldajez |
| 2E0198 | 899＇G | LOL＜－でGZて | عG－opeturde $\perp$ | 6E9LS | Sع＇z¢ | IてL＜－でてZて | K！！ulu | 6998tl | 6995 | レレ：IL 810ZILLIL | LOL＜－でZZZ | lopefuadel |
| 06L1カを | Z0L＇t | LSL＜－1．691 | عQ－au！upaydəopnasd | ZOZL | LE09 | ＂$\varepsilon$ ¢ 1 ＜－1．991 | LL． 60 t | LZL909 | $\varepsilon \angle L ' t$ | LI：L1 8LOZILLIL | $8 t 1<-1991$ | әu！perydəopnesd |
| 06161 | 2109 | Z61＜－Zと99 | 01－U－u0iKuəud | 0¢98 | Lt＇st | Z8L＜－L＇ESZ | K！！U！u | L\＆ゅを | عย0．9 | LL：LL 8LOZ／LL／L | $\bigcirc 01<-1.8 G Z$ | u07Ku2Yd |
| DEGG601 | 7SO9 | で98く－で6⿰七 | SG－au！p！pKıuәपd | SOSL | Kप！u！u | 1＇L6＜－で七tて | 06．802 | L6L281 | tS0＇9 | LI：L1 810Z／LLIL | で98く－でもちて |  |
| LL912 | 909＇9 | － $81<0$－$¢ 5 \varepsilon$ | to－medəzeuəyd | 6＜LLE | 200181 | を8L＜－0．6戊 | Slozts | t0LSs | 909＊9 | LL：L1 810ZILL／L | 902＜－0．6tを | uedazeuayd |
| 88002t | 6\＆S＇9 | と\＆Zく－でし9Z | $\varepsilon \square-\partial u!K I d!$ IoN | E9906 | Kı！ | をとてく－でヤ9て | K！！ | 156601 | OtS 9 | 1L：L1 810ZILLIL | で16く－でヤ9Z | 2U！K¢！！ |
| 86892Z | 00LS | $8 \varepsilon 1<-て ゙ 162$ | LO－medazentunyoulue－L | OSttr | 09．92 |  | 68．269 | †9888 | LZL＇S | LL：L1 8LOZILL／L |  | uedazenun！oumb－L |
| S9988Z | 8029 | ワ91＜－で8EZ | $\rightarrow$－əu！p！ | 8ZLZS | ZZでく9 | 091＜－L＇も | K！！पुप｜ | LLELL | LEL＇S | LL：L1 810ZILL／L |  | au！p！！ədəunon |
| L0996t | 0¢9＇9 | S6Z＜－108E | to－mejozep！w | 8LZGZ | LL＇9tl | 6ヶて＜－1．9Zを | 9ZLZL | Z698Z | LS9＇9 | LI：L1 8LOZILLIL | を $¢ 乙<-1.9 Z \varepsilon$ | uelozep！ N |
| 918988 | LE6＇S | ちてZ＜－でZSZ | tव－əu！p！ədaw | tSSLL | ع9\％0tL |  | Kप！u！u | EsZZIE | LSL＇S | LL：Lレ 8LOZILL／L | でヤ8＜－でャ\＆て | ә！ер！иәиd｜KııəN |
| 918988 | LE6＇S | ャてZく－でてらて | จロ－əu！p！ıadəW | S1998 | 08® $¢$ | $\square \angle L<-Z \cdot 8 \downarrow$ ¢ | 90＇tt | \＆ャレL9 | ZS6．9 | LL：L1 8L0ZILLIL | OZZ＜－で8ヤて | buppıadew |
| L886t | SOZ＇s | ＂991＜－で00Z | 90－VWOW | 69Z0G | K！प！ | SOL＜－1．061 | Kप！प！ | L8tヤL | S0Z＇9 | LL：L 8LOZ／LL／L | ع91＜－1＇t6L | VWOW |
| $9767 t 9$ | StE S | 991＜－でャレて | 90－VヨaW | 9LE9L | 0899 | G0L＜－1．802 | ZL．818 | 999 ¢6 | 998． | LL：LL 8L0Z／LL／L | ¢91＜－1．802 | VヨロW |
| ES99SZ | ¢90＇s | 891＜－1＇981 | GO－VOW | L6té | पप！प！ए4 | ＇S0L＜－L＇081 | Kıप！ | †9668 | 980＇9 | LL：L1 8LOZILLIL | ¢91＜－1．081 | VOW |
| カE9LZ9 | LL9＇9 | で16く－で18Z | हव－əu！Kı！ | 8で69 | Kı！u！u |  | K！！ugu | 967081 | 669.9 | レL：Lレ 8LOZILLIL | て＇16＜－て＇8LZ | Pun！ |
| D69GSZL | L26．9 | 8 ¢てく－でて6\＆ | Sa－luwiuəns | E6SEt | Kı！u！ | 8L1＜－1．GOZ | Kप！u！ | S6995 | OLG＇9 | レL：L1 8LOZILLIL | Z＇16＜－L＇GOZ | өlosimene7 |
| ESL80th | 9199 | と＇ 1 ＜－でヤ8て | $\varepsilon \square^{\text {－oulued！um }}$ | ヤヵGZ | K！！u！u | ع＇89＜－て＇18Z | E6\％ 291 | カレとをtt | Lع9＇9 | いL：LL 8LOZILLIL | て＇98＜－で182 | әu！uerd！u｜ |
| $68 \varepsilon 10 \varepsilon$ | とで・9 |  | to－zuopidoz | L099t | 10ZL1 | LLE＜－で88¢ | 1965tel | L9Z681 | 909.9 | LL：L1 8LOZILLIL | ¢1¢＜－で88¢ | uedazemily |
| L9981 | 6での | Sカてく－1．1ZE | LO－wedazentunly | もてしてZ | 9S．91－tL |  | －0．8ちて | 82L89 | OSt＇9 | LL：LL 810ZILLLL | $892<-1 \downarrow 1$ ¢ | medezentuunts |
| LLE8EE | 1689 | ZLZ＜－1．008 | SO－mejozels 3 | EZ8S9 | ZL｀998 | G0Z＜－1．962 | ZL’889 | 8 8اL． 9 | ELt ${ }^{\text {che }}$ | LL：LL 8102／LL／L | L92＜－1．96Z | mejozets |
| 026608 | เ68＇9 | $\angle 01<-て ゙ \varepsilon 8 乙$ | ع0－uldaxog | t6t6t | Kम！प！ | Z＇LL＜－で08Z | LLGCL | OヤE6EL | SLt•9 | ＂LL：LL 810ZILL／L | LOL＜－Z．08Z | uldexog |
| Ot96291 | 66 ＇$^{\circ}$ |  | $\varepsilon$ ¢－au！ueldisad | 9891 | Kı！u！u | どttく－でく92 | K！！ | Z800ZE | 66t•9 | LL：LL 810ZILLIL | どてL＜－で $29 Z$ | əu！ueld！sed |
| t69sczi | L26．9 | $8 \varepsilon Z<-Z て 6 \varepsilon$ | SC－luejuəns | LL692 | 80．91t | － $11<-て ゙ \angle 8 \varepsilon$ | E9＇tSL | －ヵLZ0E | $8 \pm 6{ }^{\circ} 9$ | LL：LI 810ZILLIL | 8\＆て＜－でL88 | l！uetuajns |
| 81Z16E | E69＇9 | 982＜－1－908 | GC－ap！xodaze！pıoluO | 89602 | ＜t＇E9 | Z8Z＜－1．008 | カで161 | 82688 | \＆19．9 | IL：LI 810ZILLIL | LZZ＜－1．00¢ | әр！xodəze！pıopuつ |
| てカ9Eくカレ | 981．9 | 00z＜－1．$\frac{1}{}$ ¢ | 90عl－auidazeurajeo | －ヤてカて | K！पuyu | 761＜－1＇LEZ | £¢＇६̧Z | ع9962 | LEL＇9 | LL：LL 810ZILLIL | ¢6L＜－1＇LEZ | әu！dəzemeque丁 |
| LLZELS | $\angle 96{ }^{\circ} \mathrm{t}$ | でヤくく－でもてZ |  | Lع9Z | 96．1E | $\varepsilon{ }^{\prime} 95<-1.612$ | 9769 | $\square ¢ \angle 8$ | $8 \angle 6{ }^{\circ} \mathrm{t}$ | IL：LI 810ZILL／L | でヤ8＜－1．612 |  |
| 七E9＜29 | $\angle L 999$ | で16く－で18て | $\varepsilon \square$－əu！イId！ | $112 \mathrm{Ca6}$ | K！！u！u | SOL＜－で8LZ | ｜и！ $\mid$ 茊 | ｜96508｜ | 669\％9 | LI：II 810ZILLIL | で16く－で8L2 |  |
| 69899t | 99t．9 | ＂8z \ll－1．9t¢ |  | てZs6t | $0092 Z$ | と0Z＜－1゙てカ¢ | ｜п！ | ｜とて108 | L29t＇9 | LI：H1 810ZILLIL | ヤて\＆く－1てヤャ |  |
| 099L912 | $\angle 889$ | S01＜Z 8 \％ |  | zolze | $6 \downarrow$ b | SOL＜－てとZと | 08001 | SZ902 | 80079 | $11: 11810 Z / L 1 / 2$ | 88 L ＜－でとZを |  |
| －dsoy | 14 | uon！${ }^{\text {a }}$ | amen | ear $\forall$ | N／S | uoulsue」 1 | N／S | dsoy | 14 | әull－alea bov | uonsue」 | amen |
| sulnsey OLS｜ |  | poupow OISI |  | sunsay L dayueno |  | ＂W L Jelpeno | sinsay qz－L leo zd |  |  | qで－1eo $\mathrm{Zd}^{\text {d }}$ | poypew punodwoo |  |


| S81L0E | とてヤ゙9 | $\cdots \square\rangle Z<-1 . \varepsilon 6 \varepsilon$ | ヤ（1－8uopldoz |  |  | $\cdots 912<-1688$ |  |  |  | W $\checkmark$ 0ع：LI 810ZILL／L | $\cdots \square \square 乙<-1.68 \varepsilon$ | euopidoz |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8LSLZE | くてで9 | $\cdots 0\rangle z<-201 \varepsilon$ | 70－uoldəjeZ |  |  | ＂ャ92＜－190\＆ |  |  |  | WV 0¢：LI 8L0ZILLIL | ＂98乙＜－190\＆ | uopdejez |
| ヤLtヤ88 | 895＇5 | ＂ $201<-て ゙ S Z Z ~$ | Ea－Iopeluede 1 |  |  | －1てしく－でてZて |  |  |  | W＊0E：LL 8LOZILLIL | － $201<-て ゙ Z 2 て ~$ | popeluade1 |
| L69898 | 20L＇t | －LSL＜－1．691 | ع口－əu！ppə¢dəopnəsd |  |  | ＂と¢ $<-1.991$ |  |  |  | WV 0E：LL 8LOZILL／L | 8ヤ1＜－1991 | əu！！peudeopnesd |
| SLLOZ | 2109 | 261＜－でと9て | 0LG－u！ołKuəud |  |  | 乙81＜－1．ESZ |  |  |  | W $\forall 0 \varepsilon: L 1$ 8LOZ／LL／L | 七O1＜－1．cs己 | u！ozKuəบd |
| －6Z0Z1 | 7509 | て $98<-$－ $6 \downarrow \square$ | S（1－2u！p！p／pイoueud |  |  | $1.6<-て ゙ 巾 \downarrow て$ |  |  |  | W $\forall$ 0E：L1 8LOZILL／L | て＇98＜－で切 | әu！p！pイวuәบd |
| 000LZ | 9099 | ＂ $881<-0$－$¢ 5 \varepsilon$ | t0－wedazeu＊ud |  |  | ＂と81＜0 6七を |  |  |  | W＊0E：LL 8LOZILL／L | $\cdots 902<-06 も \varepsilon$ | uedəzeuəud |
| 8ZE9St | 6859 | ＂$\varepsilon$ ¢ \ll Z 297 |  |  |  | $\cdots$＂と\＆乙＜－でャ92 |  |  |  | W $\forall$ 0E：LL 8LOZ／LL／L | て16＜－でャ9て | Ou！｜Kı！ |
| L6699Z | 100L9 | 8\＆L＜－でレ6Z | La－uedəzen！un！ou！ue－$L$ |  |  | でと6＜－1ヤ8乙 |  |  |  |  | Sc1＜－1ヤヤ8己 | uedazen！unjou！ur $\forall$－L |
| 809662 | $62 \angle 9$ | $\cdots \square 91<-て ゙ 8 \varepsilon Z$ | $7 \square$－əu！p！əədəuıON |  |  | －091＜－1ヤを己 |  |  |  | WV 0ع：LL 8LOZILLIL | $\varepsilon 乙 \downarrow<-1 \downarrow \varepsilon 己$ | əu！p！ıədəmıN |
| $82 \angle 0\rangle$ S | 089．9 | ＂962＜－108E | 70－uejozep！ N |  |  | 6ャて＜－1928 |  |  |  |  | ＂とZ己＜－L9つを | uejozep！w |
| 986EZt | 186 S | 「ャてて＜－でこらて | 哬－əu！p！nadəW |  |  | と99く－でヤ¢乙 |  |  |  | WV 0E：L1 8LOZILL／L | でヤ8く－でヤย己 | әృep！uəud｜KцəəW |
| S86E2t | 1869 | ＂ャてて＜－でてらる | 7 O －əu！p！radəw |  |  | $\cdots \square \angle L<-て 8 \downarrow$ ¢ |  |  |  | WV 0E：11 8LOZILL／L | －0てZ＜－で8もて | əu！puodew |
| 01L8t | 902s | 991＜－で002 | 90－VWCW |  |  | SOL＜－1ャ61 |  |  |  | WV0E：LL 8LOZILL／L | ＂ $891<-1.761$ | VWOW |
| 769099 | StES | 991＜－でヤレて | 90－VヨOW |  |  | 901＜－1802 |  |  |  | WV0E：LL 8LOZ／LL／L | ¢91＜－L＇802 | VヨaW |
| 899892 | 790 S | 891＜－1981 | SO－VOW |  |  | S01＜－1．081 |  |  |  | WV 0ع：LL 8LOCILLIL | E91＜－L．081 | $\forall O W$ |
| ヤ888¢9 | $\angle 69.9$ | て＇16＜－て＇8Z | $\varepsilon \square$－əu！！к1d！a！u＊ |  |  | $\cdots \angle 1<-28 L 己$ |  |  |  | WV 0E：LL 8LOZILL／L | て $16<-2 \cdot 8 L 己$ | əu！！！ordew |
| 0¢ZEL | L269 | 8を己＜－でて6を | Sa－l！uequajns |  |  | 8L1＜－19902 |  |  |  | W＊0E：L1 810ZILL／L | こ16＜－1゚902 | əos！ue＾ə7 |
| ＂ 2 C97 | 989 9 | どレ9＜－でャ8て | ع0－əu！ueıd！u！ |  |  | と8S＜－で182 |  |  |  |  | て，98＜－で18乙 | əu！ueıd！u｜ |
| S81 208 | とで9 | $\cdots \square \nabla Z<-1.86 \varepsilon$ | t0－əuojग！doz |  |  | $\cdots 1 \varepsilon<-て ゙ 88 \varepsilon$ |  |  |  | WV 0ع：11 810ZILL／L | G1E＜－て 88E | uedozennly |
| OヤL91 | 6てカ9 | $\cdots \mathrm{G}$－－－－－ | La－uedəzen！unly |  |  | $\cdots 6 \varepsilon 乙<-1 \downarrow 1 \varepsilon$ |  |  |  | W O OE：LL $_{\text {8LOZILLIL }}$ | $892<-レ ヤ$－ | uredozentuny |
| $8 \vdash 898 \varepsilon$ | 1689 | てLZ＜－100E | Sa－wejozels ${ }^{\text {a }}$ |  |  | $\cdots 902<-1.962$ |  |  |  | WV 0ع：L1－8LOZILL／L | $\angle 92<1.962$ | uejozeis ${ }^{\text {a }}$ |
| 888278 | －689 9 | ＂ $201<-て$－ $88 乙$ | E0－u！dexog |  |  | でLL＜－で08て |  |  |  | WV 0ع：LL 8LOZ／LL／L | ＂ $201<-2082$ | u！dexog |
| ＂E0ELL | 66ャ9 | どSLく－で0Lて | हव－əu！ueıd！səa |  |  | とャワく－で 29 ¢ |  |  |  | WV 0ع：LL 8LOZ／LL／L | $\varepsilon \square L<-Z \angle 9 Z$ | əu！ueıd！sad |
| 0عट\＆L | $\angle 269$ | ＂8\＆己＜－でて6を | Sa－lıuepuojns |  |  | $\cdots レ 1<-て ゙ \angle 8 \varepsilon$ |  |  |  | WV 0ع：L1．810Z／LL／L | －8\＆て＜－でL8\＆ | l！uezurjns |
| L6600t | \＆65＇9 | ＂982＜－1908 | S（1－əp！xodəze！pıo｜uつ |  |  | 28Z $<-1008$ |  |  |  | WV 08：L1．810ZILL／L | $\angle Z 乙<-1.00 \varepsilon$ | әp！xodeze！pıol40 |
| 61601 | 19819 | $\cdots 002<-L \subset \triangleright 乙$ | 908l－əu！dəzeueqıeつ |  |  | $\cdots \square 61<-1.2 \varepsilon z$ |  |  |  | W＊0ع：LL 8LOZILL／L | E61＜－L L L | ouidәzeureques |
| 6L9ESS | $\angle 56$ | でャ8く－でゅて乙 |  |  |  | $\varepsilon \cdot 99<-1612$ |  |  |  | W甘 0ع：LL 8LOZILLIL | でャ8＜－1．6LZ | ｜イиепиəข） |
| カ88\＆99 | ［ $\angle 699$ | て16＜－で18て | $\varepsilon \square-ə u!\|k\| d!n!u n v$ |  |  | ＂GOL＜－で8L己 |  |  |  | W $\forall$ 0ع：LL 8LOZ／LL／L | でレ6＜－Z＇8LZ | 2u！｜KI！！れ！u |
| 82L209 | 199＊9 | $\cdots 82 \varepsilon<19 \downarrow \varepsilon$ | $\cdots$－－uejozep！uкхолрイч－eydje |  |  | を0z＜－12もを |  |  |  | W $\because 0 \varepsilon: 11810 z / L L / L$ |  | ＂jozep！uкхоиркц－eydje |
| 692てZ | $\angle 0 巾 9$ | SOL＜－2828 | GO－Kueluenkioov |  |  | 901＜－\％¢ ¢ |  |  |  | WV0E：L18102／LL／L | 881＜－でと己を |  |
| －dsay | 14 | nomsue」 1 | amen | eerv | N／S | UO！！${ }^{\text {a }}$ | N／S | －dsey | 14 | әu！1－əred＇boy | UOMSUE」1 | amen |
| sunser | OLSI |  | poutow $\mathrm{O} \perp \mathrm{SI}$ | $\cdots 19!$ | eno | $\cdots$ W L jameno | synsey | O－อn！p | $z \mathrm{~d}$ | jonuoo annebeu zd | po | ew punoduos |


| 19t0zz | とです | ＂ャワて＜－1＇ 6 ¢ | t0－zuopidoz |  |  | ＂912＜－1．68\＆ |  |  |  | $\forall$ OS：LL 8LOZILLIL | $\cdots \square \square 乙<-1.68 \varepsilon$ | əuopldoz |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 98LOLE | LてZ゙9 | －0ャて＜－で018 | ta－uoldəjeZ |  |  | ャ92＜－1908 |  |  |  | ＂$\forall$ OSIL 8LOZILLIL | 98Z＜－1．90¢ | uoldejeZ |  |
| L8L698 | 899＇9 | ＂ 201 －Z＇GZZ | हव－opetuede |  |  | ＂レてL＜－でてZて |  |  |  | $\forall$ OS：LI 810Z／LL／L | LOL＜－ででて | lopeluadel |  |
| E6LE9t | EZL゙っ | － $151<-1.691$ | $\varepsilon$ ¢－əu！paudzopnosd |  |  | －$\varepsilon$ ¢L＜－1＇991 |  |  |  | $\forall$ OS：LL 8LOZILLIL | 8カ1＜－1．991 | әu！！pəudəopnəsd |  |
| Z2861 | 280\％9 | Z61＜－Żと92 | 010－u！piKuaud |  |  | Z8L＜－L＇EGZ |  |  |  | $\forall$ OS：LL 8LOZILLIL | 701＜－L＇¢¢Z | ulotKueyd |  |
| 889Z1 | ¢S0．9 | て＇98く－で6ちて | GO－əu！p！！pイouәud |  |  | 1•16く－でヤヤて |  |  |  | $\forall$ OS：L1 810Z／LL／L | て＇98＜－でャカて |  |  |
| 08tを | 909．9 |  | 70－uredazeuald |  |  | を8L＜－0．6ャを |  |  |  | $\forall$ OS：LL 8LOZILLIL | 902＜－0．6tを | uedezeuəपd |  |
| tSLOSt | 68599 |  |  | ع¢98 | totl | －$\varepsilon$ ¢ $<$－でゅ9て | $\varepsilon 8$ ¢ $\dagger \square \varepsilon L$ | LEL986 | 0ャG＇9 | $\forall$ OS：LL 8LOZILLIL | て＇L6＜－Z＇t9Z | 2u！K！d！ |  |
| 8tZS $\angle 2$ | 00LS | $881 \ll$ で16Z | LO－uedazen！unfou！ue－L |  |  | でと6＜－1＇ャ8て |  |  |  | $\forall$ OS：LL 8LOZILLIL | cel＜－1＇ท8Z | uedazenun！uoumu－ |  |
| ZLE992 | 6ZLS | ャ91く－で8\＆え | tG－aup！adəயuon |  |  |  |  |  |  | $\forall$ OS：LL 8LOZILL／L | $\varepsilon$ 沛＜－L＇も | әu！p！edəunon |  |
| 6LLOOS | 10899 | G6z＜－1－0¢E | 70－mejozep！w |  |  | 6もZ＜－1．9Z |  |  |  | V OS：LI 8LOZILLIL | とてZ＜－1＇92¢ | uejozep！w |  |
| 99781ヶ | 1LE69 | 「ロてく＜－でZ乌Z | tव－əu！p！adəW |  |  | $\varepsilon \cdot 9 ¢<-て ゙ \downarrow$ ¢ |  |  |  | $\forall$ OS：LL 810ZILL／L | でヤ＜－でけとて | әъер！иәчd｜イчəəW |  |
| 99t8Lt | 11869 | ャてZ＜－でてらZ | to－əu！p！ıədəW |  |  | $\checkmark \angle 1<-て ゙ 8 \triangleright て$ |  |  |  | ＊0S：11 8102／LL／L | 0Zて＜－で8ャて | əu！puədaw |  |
| 8ELSt | SOZ＇G | 991＜－で002 | 90－VWOW |  |  | ＂＇901＜－L＇t61 |  |  |  | ＂$\forall$ OS：11 810Z／LL／L | と91＜－1 1 ¢61 | VWOW |  |
| 981609 | 1998＇G | 991＜－でャレて | 90－$\forall \exists$ OW |  |  | ＂ $901<-1.802$ |  |  |  | $\forall$ OS：LI 8L0ZILLIL | と91＜－1．802 | VヨロW |  |
| 8 S 86 t | 1790G | $891<-1.981$ | GO－VOW |  |  | S0L＜－L＇08L |  |  |  | $\forall$ OS：LL 8LOZILLIL | c91＜－1．081 | VOW |  |
| LOELE | 10889 | て＇16＜－で18Z |  |  |  | ＂$\angle 1 L<-て ゙ 8 L Z$ | 08＇9 | 6698 | 092＇9 | $\forall$ OS：LI 8LOZILLIL | で16く－で8Lて | aul！ |  |
| 8L821 | L269 | 8\＆てく－でて6\＆ | Sa－l！uetuajns |  |  | $8 \angle 1<-1902$ |  |  |  | $\forall$ OS：L1 810ZILLIL | Z $16<1$－ 502 | әроs！uren ${ }^{\text {a }}$ |  |
| と9ヶカレ | 19899 | ど19く－でヤ8て | Eq－auluerduu |  |  | を＇8¢＜－て＇182 |  |  |  | $\forall$ OS：LI 8L0Z／LL／L | で98ぐで182 | әu！ |  |
| L9t0てZ | にてカフ 9 | 切く－1－£6E | 70－əuoloidoz |  |  | －$\angle 1$ L＜－Z 888 |  |  |  | －$\because$ 0S：11 810ZILLIL | SLE＜－で88\＆ | medazemin |  |
| OSStı | 6でけ 9 | Stて＜－1．12¢ | LO－uedəzenilunly |  |  |  |  |  |  | $\forall$ OS：LI 8LOZILLIL | 892＜－1ヤ1を | uedazentunly |  |
| E8LG9E | 1レヤナ9 | ZLZ＜－1．00\＆ | SO－wejozers |  |  | S0Z＜－1＇962 |  |  |  | $\forall$ OS：LI 8L0ZILLIL | $\angle 9 Z<-1 \cdot 962$ | mepozels |  |
| 769618 | カレガ9 | ＜ $201<-て ゙ \varepsilon 8 Z$ | ह0－uldaxod |  |  | でLLく－で082 |  |  |  | $\forall$ OS：LL 8LOZILLIL | LOL＜－で08Z | u！daxog |  |
| 10291 | 66t＇9 | $\varepsilon 9 \angle<-Z ゚ 0 \angle Z$ | $\varepsilon \square$－əu！ue．Idisod |  |  | どカヤくーでく92 |  |  |  | $\forall$ OS：L1 810ZILLIL | どてL＜－で $29 Z$ | au！werdisag |  |
| $8 \angle 821$ | LLZ6＇9 | $88 乙 \ll て ゙ Z 6 \varepsilon$ | sc－luequajns |  |  | －11く－でく88 |  |  |  | $\forall$ OS：LI 8LOZILLIL | $8 \varepsilon 乙<-て ゙ \angle 8 \varepsilon$ | llueurans |  |
| LSt08E | E6S＇9 | 982＜－L＇s0 | ¢0－әp！xodəze！pıolu亏 |  |  | Z8Z＜－1．008 |  |  |  | V OS：IL 8LOZILLIL | $\angle C Z<-1.00 \varepsilon$ | әp！xodəze！p．olyo |  |
| 82Lロー | 19819 | $002<-1 \cdot \varepsilon \triangleright Z$ | 90عl－əu！dəzeueqıes |  |  | 七6L＜－L＇LEZ |  |  |  | $\forall$ OS：LI 8L0ZILILL | ¢61＜－1－LEZ | әuidəzeweqrey |  |
| 20LGOS | 1296＇t | でャ く－でヤてZ |  |  |  | $\varepsilon 95<-1.612$ |  |  |  | $\forall$ OS：LL 810 OLILLIL | でャ＜－1．612 |  |  |
| LOELE | 1088＇9 | て＇16＜－で18Z | عव－əu！イ！ |  |  | S01＜－で8LZ |  |  |  | $\forall$ OSFLL 8LOZILLIL | て＇ 6 ＜－で8LZ | 2u！｜K¢！ |  |
| －LOt8t | 99t＇9 | －8乙¢＜－19 $9 \downarrow$ | －－we｜ozep！uイरхолрKи－eydje |  |  | と0Z＜－1＇こセを |  |  |  | $\checkmark$ OSiLl $810 \mathrm{OL} / 4 \mathrm{~L} / \mathrm{L}$ |  |  |  |
| －stelz | L 20 「9 | SOL＜－ 8 \％ 8 |  |  |  | C01＜－ZとZE |  |  |  | $\forall$ OS：118102LLLIL | $881<-乙$－ ¢ |  |  |
| ＇dsey | 18 | uompued | əuen | EaJV | N／S | uo！！ | N／S | dsoy | 18 | əull－aiea bov | uomsuel 1 | əuen |  |
| synsə | OLSI |  | POчFW OLSI |  | elyeno | $\cdots$ W L delueno | sifnsey | дuoo jeu | ¢ z $^{\text {d }}$ |  |  | new punoduos |  |

Extraction Date：$\quad 7-17-18$
Plate lot\＃： 0515037
Plate Expiration：9／28／2018
Mobile phase A： 10 mM Ammonium Formate Mobile phase B： $0.1 \%$ Formic acid in MeOH
$0.1 \%$ Formic Acid in Water
Blank Blood Lot： 17 J20718
MTBE
Column：Phenomenex Phenyl Hexyl（4．6x50mm： 2.6 um）

LCMS－QQQ ID： 62340

## Pre－Analytic：

1．Check levels of mobile phases and needle wash refill as needed．Ensure waste is not full．
四 2．Ensure correct column is installed and begin mobile phase flow allow to equilibrate $\sim 30$ minutes．
（ヌ）3．Create worklist：

## Analytic：

ஷ 1．Remove standards，plate，controls，and samples from cold storage．Allow to reach room temperature．
內 2．Pipette $\mathbf{1 0 0 0} \boldsymbol{\mu} \mathbf{L}$ blood（calibrated pipette）Pipette ID：k52558 in wells of analytical（standards）plate．
－Blank blood for locations containing standards／QCs and internal standards
－Sample blood for locations containing only internal standards
$\pm$ 3．Place on shaking incubator at ambient temp．， 900 rpm for 15 minutes．Shaker ID： 66759
（ 4 ．Pipette $\mathbf{5 0 0} \boldsymbol{\mu} \mathrm{L} \mathbf{0 . 1} \%$ formic acid in wells of analytical plate．
5．Place on shaking incubator at ambient temp．， 900 rpm for 15 minutes．
6．Transfer $800 \mu \mathrm{~L}$ of blood＋base mixture to corresponding wells of SLE＋plate．
7．Apply positive pressure for approx． 4 seconds（or until no liquid remains on top of sorbent）．
（Load at 85－100 PSI－Selector to the right）Manifold ID： 66792
（\％）8．Wait 5 minutes．
【 9．Add $\mathbf{2 . 2 5} \mathbf{~ m L}$ MTBE（add in 3 increments of 750 uL ）．
\10．Wait 5 minutes．
（ 11．Apply positive pressure for approx． 15 seconds．（10－15 PSI－Selector to the left）．
12．Add 2.25 mL hexane（add in 3 increments of 750 uL ）．
W 13．Wait 5 minutes．
14．Apply positive pressure for approx． 15 seconds．（10－15 PSI－Selector to the left）．
X 15．Remove plate containing eluate．Place on SPE Dry and evaporate to dryness at approx． $35^{\circ} \mathrm{C}$ ．
SPE Dry ID： 66819
区］16．Reconstitute in $\mathbf{1 0 0} \boldsymbol{\mu} \mathrm{L} \mathbf{1 0 0 \%} \mathbf{M e O H}$ and heat seal plate with foil．Place in autosampler and run worklist．

## Post－Analytic

邓 1．Create batch and process data．
Worklist path： $0>1718$ AM 25－26 Batch Name：conn screch
囚 2．Calculated sample concentration of $3 \mathrm{ng} / \mathrm{mL}$ or greater for THC and THC－OH，a calculated sample concentration of $10 \mathrm{ng} / \mathrm{mL}$ or greater for Carboxy－THC．
3．Retention time within $+/-2 \%$ or $+/ .100 \mathrm{~min}$ whichever is greater of the average retention time of the calibrators．
$\$ 4$ 4．Did all QCs pass for each analyte？Y／N
5．Central File Packet to include：LIMS Worklist，Method Checklist，Calibration and Control Reports
COMMENTS：


## ISP FORENSICS - Cd'A Instrument \#62340 <br> Cannabinoid Screen Report

| Batch Data Path | D: \2018 Data\071718 | 25-26\QuantResu | s\cann screen.batch.bin |
| :---: | :---: | :---: | :---: |
| Analysis Time | 7/18/2018 8:03 AM | Analyst Name | ISP Tox |
| Report Time | 7/19/2018 9:19 AM | Reporter Name | ISP Tox |
| Last Calib Update | 7/18/2018 8:03 AM | Batch State | Processed |
| Analysis Info |  |  |  |
| Acq Time | 2018-07-17 18:10 | Data File | neg control.d |
| Sample Type | Sample | Sample Name | neg control |
| Dilution | 1 | Acq Method | Screen THC 8-2017.m |
| Position | P1-A2 | Sample Info |  |
| Inj Vol | -1 | Comment | AM 26 Cannabinoid screen |

Sample Chromatogram


## ISP FORENSICS - Cd'A Instrument \#62340 Cannabinoid Screen Report

| Batch Data Path | D:\2018 Data\071718 | 26\QuantResu | s\cann screen.batch.bin |
| :---: | :---: | :---: | :---: |
| Analysis Time | 7/18/2018 8:03 AM | Analyst Name | ISP Tox |
| Report Time | 7/19/2018 9:19 AM | Reporter Name | ISP Tox |
| Last Calib Update | 7/18/2018 8:03 AM | Batch State | Processed |
| Analysis Info |  |  |  |
| Acq Time | 2018-07-17 17:57 | Data File | QC $10 \mathrm{ng} . \mathrm{d}$ |
| Sample Type | QC | Sample Name | QC 10 ng |
| Dilution | 1 | Acq Method | Screen THC 8-2017.m |
| Position | P1-H1 | Sample Info |  |
| Inj Vol | -1 | Comment | AM 26 Cannabinoid screen |

## Sample Chromatogram



## Results

Compound
THC-COOH THC-OH

THC

## RT

3.426
3.493
3.840

## Response

11563
33205
2283

42920
316953
20437

Resp Ratio
0.2694
0.1048
0.1117

Final Conc
11.9700
9.9979
9.5555

## ISP Forensics

Calibration Curve Report


| Sample | Level | Enabled | Exp Conc | Final Conc | Accuracy |
| :---: | :---: | :---: | :---: | :---: | :---: |
| cal 1 - 3 ng | 1 | - | 3 | 3.0 | 98.4 |
| cal $2-5 \mathrm{ng}$ | 2 | 吅 | 5 | 4.5 | 90.1 |
| cal 3-10ng | 3 | $\square$ | 10 | 10.7 | 107.3 |
| QC 10 ng | 3 | $\square$ | 10 | 12.0 | 119.7 |
| cal 4 - 25 ng | 4 | $\square$ | 25 | 24.8 | 99.1 |
| cal 5-50ng | 5 | ■ | 50 | 49.7 | 99.5 |
| cal 6-100ng | 6 | $\square$ | 100 | 109.1 | 109.1 |
| cal 7-250ng | 7 | $\square$ | 250 | 241.2 | 96.5 |

## Calibration Curve Report




| Sample | Level | Enabled | Exp Conc | Final Conc | Accuracy |
| :--- | :---: | :---: | :--- | :--- | ---: |
| cal 1-3ng | 1 |  | 3 | 2.8 | 92.6 |
| cal 2-5ng | 2 |  | 5 | 4.7 | 94.8 |
| cal 3-10ng | 3 | $\square$ | 10 | 10.3 | 103.0 |
| QC 10 ng | 3 |  | 10 | 10.0 | 100.0 |
| cal 4-25ng | 4 |  | 25 | 25.3 | 101.1 |
| cal 5-50ng | 5 | $\square$ | 50 | 51.8 | 103.5 |
| cal 6-100ng | 6 |  | 100 | 109.5 | 109.5 |
| cal 7-250ng | 7 | $\square$ | 250 | 238.6 | 95.5 |

## ISP Forensics <br> Calibration Curve Report

## Batch Data Path Last Calib Update

 D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin 7/18/2018 8:03 AM Analyst Name ISP TOXTarget Compound
THC
Internal Standard
THC-d3


| Sample | Level | Enabled | Exp Conc | Final Conc | Accuracy |
| :---: | :---: | :---: | :---: | :---: | :---: |
| cal 1-3ng | 1 | ■ | 3 | 2.9 | 96.3 |
| cal $2-5 \mathrm{ng}$ | 2 | - | 5 | 4.8 | 96.8 |
| cal 3-10ng | 3 | ■ | 10 | 10.1 | 100.5 |
| QC 10 ng | 3 | - | 10 | 9.6 | 95.6 |
| cal 4-25ng | 4 | $\square$ | 25 | 24.8 | 99.3 |
| cal 5-50ng | 5 | 䀦 | 50 | 50.4 | 100.8 |
| cal 6-100ng | 6 | $\square$ | 100 | 110.4 | 110.4 |
| cal 7-250ng | 7 | $\square$ | 250 | 239.6 | 95.8 |

## ISP FORENSICS - Cd'A Instrument \#62340 <br> Cannabinoid Screen Report

Batch Data Path
Analysis Time
Report Time Last Calib Update

## Analysis Info

Acq Time Sample Type Dilution Position Inj Vol

D: \2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin
7/18/2018 8:03 AM Analyst Name ISP Tox
7/19/2018 9:19 AM Reporter Name ISP Tox
7/18/2018 8:03 AM Batch State Processed

2018-07-17 17:04
Calibration
1
p1-a1
-1

Data File
Sample Name
Acq Method
Sample Info
Comment AM 26 Cannabinoid screen

## Sample Chromatogram



| Results |  |  |  |  | Response |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Compound | RT | 3145 | 37962 | 0.0829 | 2.9508 |
| THC-COOH | 3.426 | 8880 | 284554 | 0.0312 | 2.7776 |
| THC-OH | 3.493 | 1022 | 30622 | 0.0334 | 2.8904 |
| THC | 3.820 |  |  |  |  |

## ISP FORENSICS - Cd'A Instrument \#62340 <br> Cannabinoid Screen Report

Batch Data Path
Analysis Time
Report Time
Last Calib Update
Analysis Info
Acq Time
Sample Type
Dilution
Position
Inj Vol

| D: $\backslash 2018$ | Data $\backslash 071718$ | AM 25-26\QuantResults $\backslash c a n n ~ s c r e e n . b a t c h . b i n ~$ |
| :--- | :--- | :--- |
| 7/18/2018 8:03 AM | Analyst Name | ISP Tox |
| 7/19/2018 9:19 AM | Reporter Name | ISP Tox |
| 7/18/2018 8:03 AM | Batch State | Processed |
|  |  |  |
|  |  |  |
| 2018-07-17 17:11 | Data File | cal 2-5ng.d |
| Calibration | Sample Name | cal 2-5ng |
| 1 | Acq Method | Screen THC 8-2017.m |
| P1-B1 | Sample Info |  |
| -1 | Comment | AM 26 Cannabinoid screen |

## Sample Chromatogram



| Results |  |  |  |  | Response |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Compound | RT | ISTD Resp | Resp Ratio | Final Conc |  |
| THC-COOH | 3.426 | 4157 | 36137 | 0.1150 | 4.5073 |
| THC-OH | 3.493 | 14278 | 278747 | 0.0512 | 4.7422 |
| THC | 3.840 | 1336 | 23738 | 0.0563 | 4.8392 |

## ISP FORENSICS - Cd'A Instrument \#62340 <br> Cannabinoid Screen Report

Batch Data Path Analysis Time Report Time Last Calib Update

## Analysis Info

| Acq Time | 2018-07-17 17:17 | Data File | cal 3-10ng.d |
| :--- | :--- | :--- | :--- |
| Sample Type | Calibration | Sample Name | cal 3-10ng |
| Dilution | 1 | Acq Method | Screen THC 8-2017.m |
| Position | p1-c1 | Sample Info |  |
| Inj Vol | -1 | Comment | AM 26 Cannabinoid screen |

## Sample Chromatogram



## Results

| Compound | RT |
| :--- | :--- |
| THC-COOH | 3.426 |
| THC-OH | 3.493 |
| THC | 3.820 |

Response
9149
31312
2767
ISTD Resp
37521
290460
23523

| Resp Ratio | Final Conc |
| :--- | :--- |
| 0.2438 | 10.7343 |
| 0.1078 | 10.2962 |
| 0.1176 | 10.0549 |



## ISP FORENSICS - Cd'A Instrument \#62340 <br> Cannabinoid Screen Report

| Batch Data Path | D: $\backslash 2018$ Data $\backslash 071718$ | AM 25-26\QuantResults $\backslash c a n n ~ s c r e e n . b a t c h . b i n ~$ |
| :--- | :--- | :--- | :--- |
| Analyst Name | ISP Tox |  |

## Sample Chromatogram



| Results |  |  |  |  | Resp Ratio |
| :--- | :--- | :--- | :--- | :--- | :--- | Final Conc

## ISP FORENSICS - Cd'A Instrument \#62340 <br> Cannabinoid Screen Report

Batch Data Path Analysis Time Report Time Last Calib Update

## Analysis Info

| Acq Time | 2018-07-17 17:31 | Data File | cal $5-50 \mathrm{ng} . \mathrm{d}$ |
| :--- | :--- | :--- | :--- |
| Sample Type | Calibration | Sample Name | cal $5-50 \mathrm{ng}$ |
| Dilution | 1 | Acq Method | Screen THC 8-2017.m |
| Position | p1-e1 | Sample Info |  |
| Inj Vol | -1 | Comment | AM 26 Cannabinoid screen |

Position
Inj Vol

| D: $\backslash 2018$ Data\071718 | AM 25-26\QuantResults $\backslash c a n n ~ s c r e e n . b a t c h . b i n ~$ |  |
| :--- | :--- | :--- |
| 7/18/2018 8:03 AM | Analyst Name | ISP Tox |
| 7/19/2018 9:19 AM | Reporter Name | ISP Tox |
| 7/18/2018 8:03 AM | Batch State | Processed |
|  |  |  |
| 2018-07-17 17:31 | Data File | cal 5-50ng.d |
| Calibration | Sample Name | cal 5-50ng |
| 1 | Acq Method | Screen THC 8-2017.m |
| p1-e1 | Sample Info <br> -1 | Comment |

## Sample Chromatogram



Results

| Compound | RT |
| :--- | :--- |
| THC-COOH | 3.426 |
| THC-OH | 3.493 |
| THC | 3.840 |

Response
37139
147685
11984
ISTD Resp
35348
278514
20245
Resp Ratio
1.0507
0.5303
0.5920

Final Conc
49.7428
51.7667
50.3961

## ISP FORENSICS - Cd'A Instrument \#62340 <br> Cannabinoid Screen Report

## Batch Data Path Analysis Time Report Time Last Calib Update

## Analysis Info

Acq Time Sample Type Dilution Position Inj Vol

D: \2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin 7/18/2018 8:03 AM Analyst Name ISP Tox 7/19/2018 9:19 AM Reporter Name ISP Tox 7/18/2018 8:03 AM

2018-07-17 17:37
Calibration
1
P1-F1
-1
Batch State Processed

Data File
Sample Name
Acq Method
Sample Info
Comment
cal 6-100ng.d
cal 6-100ng
Screen THC 8-2017.m

AM 26 Cannabinoid screen

## Sample Chromatogram



Results
Compound
THC-COOH
THC-OH
THC

RT
3.426
3.493
3.840
Response
81778
313659
30332

30332

| ISTD Resp | Resp Ratio | Final Conc |
| :--- | :--- | :--- |
| 35891 | 2.2785 | 109.1075 |
| 280437 | 1.1185 | 109.5068 |
| 23371 | 1.2978 | 110.4243 |

Final Conc 109.1075 109.5068 110.4243

## ISP FORENSICS - Cd'A Instrument \#62340 <br> Cannabinoid Screen Report

Batch Data Path Analysis Time Report Time Last Calib Update

## Analysis Info

Acq Time
Sample Type
Dilution
Position
Inj Vol

D:\2018 Data\071718 AM 25-26\QuantResults\cann screen.batch.bin 7/18/2018 8:03 AM Analyst Name ISP Tox
7/19/2018 9:19 AM Reporter Name ISP Tox 7/18/2018 8:03 AM Batch State Processed

2018-07-17 17:44
Calibration
1
p1-g1
-1

Data File
Sample Name
Acq Method
Sample Info
Comment
cal 7-250ng.d
cal 7-250ng
Screen THC 8-2017.m

AM 26 Cannabinoid screen

## Sample Chromatogram



## Results

| Compound | RT |
| :--- | :--- |
| THC-COOH | 3.426 |
| THC-OH | 3.493 |
| THC | 3.840 |

Response
206928
821397
81982
ISTD Resp
41300
337485
29108

| Resp Ratio | Final Conc |
| :--- | :--- |
| 5.0104 | 241.1863 |
| 2.4339 | 238.6324 |
| 2.8165 | 239.5769 |



# Idaho State Police 

Forensic Services
Toxicology Discipline

## Request for Departure from an Analytical Method

Date of Request
06/28/18

## Forensic Scientist

Anne Nor

Analytical Method
Method 26

## Type of Deviation

区 Minor
Major
Departure
Allow the response from $5 \mathrm{ng} / \mathrm{ml}$ for Carboxy-THC to be evaluated as positive at the analyst's discretion.
4.3 Evaluation of Results
4.3.1 Minimum Criteria:
4.3.1.1

Analyte Administrative Threshold
THC $3 \mathrm{ng} / \mathrm{mL}$
Carboxy-THC $10 \mathrm{ng} / \mathrm{mL}$
THC -OH $3 \mathrm{ng} / \mathrm{mL}$
Calculated sample concentration of $3 \mathrm{ng} / \mathrm{mL}$ or greater for THC and THC -OH, a calculated sample concentration of $10 \mathrm{ng} / \mathrm{mL}$ or greater for Carboxy-THC.
Allow for the positive control to be prepared in house.
Rationale for Departure
AM 26 is a screening method for cannabinoids, the function of the method is to indicate if cannabinoids are present. There is a potential for a positive sample to give a response in this range in the screen.

## Discipline Leader Review

Departure approved- this deviation will remain in effect until the next method revision at which time the change will be made in the analytical method.Departure Not Approved Comments:

Date: 06/28/18
Celena Strum
Toxicology Program Discipline Leader

