

Preanalytical variability in animals, v2

05. Laboratory animals

2. Mouse

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Suggestion for use

The following information is summarized from original studies performed in very diverse conditions, with different instruments and methods, sometimes with multiple factors of variations studied simultaneously. It can thus be biased, partial, simplified, distorted, and should always be checked from the original publication.

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ACTH	Mouse	Blood	Drugs	●S: not different after isoflurane anesthesia ± vasectomy(Jacobsen et al. 2012)
ACTH	Mouse	Blood	Food	●S: not different in mice fed a regular and a high energy diet(Kalliokoski et al. 2012)
ACTH	Mouse	Blood	Stress	●P(?): ~2.5 increase after 1h immobilization; not after 12 hrs; less intense in SPF than non SPF mice(Nukina et al. 2001)
ACTH	Mouse	Blood	Stress	●P(EDTA+aprotinin): resting concentration higher in mice with high than low stress reactivity(Touma et al. 2008)
Adiponectin	Mouse	Blood	Other biological	●S: not affected by sleep fragmentation(Trammell et al. 2014)
ALAT/ALT	Mouse	Blood	Drugs	●S: isoflurane anesthesia; retroorbital sampling; increased after cisplatin and doxorubicin, not after busulfan(Rix et al. 2020)
ALAT/ALT	Mouse	Blood	Drugs	●S: dose-related increase after 28d oral dosing wit fipronil(Abouelghar et al. 2020)
ALAT/ALT	Mouse	Blood	Drugs	●S: intense increase 24h after oral gavage of 160 or 320 mg/kg acetaminophen(Shteyer et al. 2019)
ALAT/ALT	Mouse	Blood	Drugs	●S: M; >50% increase after 50 and 100 mg/L corticosterone in drinking water fr 25d(Cassano et al. 2012)
ALAT/ALT	Mouse	Blood	Food	●P(Hep): ~not different with duration and time of initiation of fasting in males(Jensen et al. 2019)
ALAT/ALT	Mouse	Blood	Food	●S: increased in mice fed a mycotoxin contaminated diet for 7wks(Hou et al. 2013)
ALAT/ALT	Mouse	Blood	Food	●S: not different when drinking sterile or slightly acidic water(Inagaki et al. 2011)
ALAT/ALT	Mouse	Blood	Other biological	●S: not different after up to 35 exposure to 56.3 kV/m, 34.7 kV/m, and 27.5 kV/m static electric fields(Lin et al. 2018)
ALAT/ALT	Mouse	Blood	Other biological	●P(Hep): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
ALAT/ALT	Mouse	Blood	Other biological	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)
ALAT/ALT	Mouse	Blood	Other technical	●S: M/F; pentobarbital anesthesia; lower after 4wk housing on wheat straw, than rice straw and wood shavings(Mohamed et al. 2018)
ALAT/ALT	Mouse	Blood	Other technical	●S: M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNCrI, C57BL/6NCrI and BALB/cAnNCrI mice(Voros et al. 2021)
ALAT/ALT	Mouse	Blood	Other technical	●S: M/F; isoflurane anesthesia; healthy animals; not different 4h & 24h after 16% blood loss(Marx et al. 2015)
ALAT/ALT	Mouse	Blood	Sampling	●S(gel): retroorbital with isoflurane vs submandibular without anesthesia; higher in submandibular specimens of 8 & 22wk-old mice(Fernandez et al. 2010)
ALAT/ALT	Mouse	Blood	Sampling	●P(Hep): ~250 µL weekly; retrobulbar isoflurane vs /facial veine without anesthesia; ~twice higher in retrobulbar specimen after 6 wks(Frohlich et al. 2018)
ALAT/ALT	Mouse	Blood	Stress	●P(Hep): time-related increase by tape immobilization; restraint increase more intense by cold exposure; moderate increase after 3h intruder exposure(Sanchez et al. 2002)
ALAT/ALT	Mouse	Blood	Stress	●S: 50% increase after 12h restraint stress(Tang et al. 2020)
ALAT/ALT	Mouse	Blood	Stress	●S: increased after acute restraint(Bao et al. 2008)
ALAT/ALT	Mouse	Blood	Stress	●S: increased after acute or chronic restraint(Oh et al. 2020)
Albumin	Mouse	Blood	Drugs	●S: M; dose-related increase after 25, 50 and 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
Albumin	Mouse	Blood	Food	●P(Hep): variably decreased with duration and time of initiation of fasting in males(Jensen et al. 2019)
Albumin	Mouse	Blood	Other biological	●P(Hep): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
Albumin	Mouse	Blood	Other biological	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)
Albumin	Mouse	Blood	Other technical	●S: M/F; pentobarbital anesthesia; not different after 4wk housing on wheat straw, rice straw or wood shavings(Mohamed et al. 2018)
Albumin	Mouse	Blood	Other technical	●S: M/F; isoflurane anesthesia; healthy animals; decreased at 4h & back to base at 24h after 16% blood loss(Marx et al. 2015)
Albumin	Mouse	Blood	Sampling	●S(gel): retroorbital with isoflurane vs submandibular without anesthesia; higher in submandibular specimens of 16 & 22wk-old mice(Fernandez et al. 2010)
Albumin	Mouse	Blood	Sampling	●P(Hep): ~250 µL weekly; retrobulbar isoflurane vs /facial veine without anesthesia; not different after 6 wks(Frohlich et al. 2018)
ALP	Mouse	Blood	Drugs	●S: dose-related increase after 28d oral dosing wit fipronil(Abouelghar et al. 2020)
ALP	Mouse	Blood	Food	●P(Hep): ~not different with duration and time of initiation of fasting in males(Jensen et al. 2019)
ALP	Mouse	Blood	Other biological	●P(Hep): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
ALP	Mouse	Blood	Other biological	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)

ALP	Mouse	Blood	Other technical	●S: M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(Voros et al. 2021)
ALP	Mouse	Blood	Other technical	●S: M/F; isoflurane anesthesia; healthy animals; not different 4h & 24h after 16% blood loss(Marx et al. 2015)
ALP	Mouse	Blood	Sampling	●P(Hep): ~250 µL weekly; retrobulbar isoflurane vs /facial veine without anesthesia; not different after 6 wks(Frohlich et al. 2018)
Amylase	Mouse	Saliva	Exercise	●Saliva: ketamine anesthesia + IP Pilocarpine; not different after 12 wks voluntary exercise (wheel) in food restricted and non food restricted mice or in non exercised controls(Yoshino et al. 2009)
Antithrombin	Mouse	Blood	Time variability	●P(Cit): no statistically significant circadian variations in C3H/HeN, BALB/cA, and C57BL/6J strains ; lowest at end of light period in Jcl:ICR (Ohkura et al. 2007)
ASAT/AST	Mouse	Blood	Drugs	●S: isoflurane anesthesia; retrororbital sampling; increased after cisplatin not after busulfan or doxorubicin(Rix et al. 2020)
ASAT/AST	Mouse	Blood	Drugs	●S: dose-related increase after 28d oral dosing wit fipronil(Abouelghar et al. 2020)
ASAT/AST	Mouse	Blood	Drugs	●S: M; >100% increase after 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
ASAT/AST	Mouse	Blood	Food	●P(Hep): not different with duration and time of initiation of fasting in males(Jensen et al. 2019)
ASAT/AST	Mouse	Blood	Food	●S: increased in mice fed a mycotoxin contaminated diet for 7wks(Hou et al. 2013)
ASAT/AST	Mouse	Blood	Food	●S: not different when drinking sterile or slightly acidic water(Inagaki et al. 2011)
ASAT/AST	Mouse	Blood	Other biological	●S: not different after up to 35 exposure to 56.3 kV/m, 34.7 kV/m, and 27.5 kV/m static electric fields(Lin et al. 2018)
ASAT/AST	Mouse	Blood	Other biological	●S: mildly lower in C57BL/6J than in 129SV/EV & C3H/HeJ strains(Mazzaccara et al. 2008)
ASAT/AST	Mouse	Blood	Other technical	●S: M/F; pentobarbital anesthesia; lower after 4wk housing on wheat straw, than rice straw and wood shavings(Mohamed et al. 2018)
ASAT/AST	Mouse	Blood	Other technical	●S: M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(Voros et al. 2021)
ASAT/AST	Mouse	Blood	Other technical	●S: M/F; isoflurane anesthesia; healthy animals; not different 4h & 24h after 16% blood loss(Marx et al. 2015)
ASAT/AST	Mouse	Blood	Sampling	●S(gel): retroorbital with isoflurane vs submandibular without anesthesia; higher in submandibular specimens of 22wk-old mice(Fernandez et al. 2010)
ASAT/AST	Mouse	Blood	Stress	●S: ~4.5 fold increase after 6h restraint stress(Kim et al. 2020)
ASAT/AST	Mouse	Blood	Stress	●S: x 2.5 after 12h restraint stress(Tang et al. 2020)
ASAT/AST	Mouse	Blood	Stress	●S: ~7 fold increase after 6h restraint stress(Kim et al. 2020)
ASAT/AST	Mouse	Blood	Stress	●P(Hep): time-related increase by tape immobilization; restraint increase more intense by cold exposure; moderate increase after 3h intruder exposure(Sanchez et al. 2002)
ASAT/AST	Mouse	Blood	Stress	●S: increased after acute or chronic restraint(Oh et al. 2020)
Basophils	Mouse	Blood	Housing	●B(?): percentage not different in mice exposed to radiant catalytic ionization for sanitization and in controls(Niemiec et al. 2022)
Basophils	Mouse	Blood	Other biological	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
Basophils	Mouse	Blood	Other technical	●B(EDTA): not different in uncultured litters than in litters culled to 4 or 6(Paigen et al. 2014)
Basophils	Mouse	Blood	Other technical	●B(EDTA): M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(Voros et al. 2021)
Basophils	Mouse	Blood	Sampling	●B(EDTA): higher from tail than eye than heart(Nemzek et al. 2001)
Basophils	Mouse	Blood	Sampling	●B(EDTA): not different in tail clipping and saphenous blood specimens(Abatan et al. 2008)
Basophils	Mouse	Blood	Sampling	●B(EDTA): altered cytogram from orbital sinus sampling(Olin et al. 1997)
Basophils	Mouse	Blood	Stability	●B(EDTA): stable up to 3d at 4°C(Ameri et al. 2011)
Basophils	Mouse	Blood	Stability	●B(EDTA) vs B(Hep): increased with time up to 72h in EDTA at 4°C, decreased in Hep(Wiedmeyer et al. 2007)
Bile acids	Mouse	Blood	Food	●S: not different when housed in conventional or metabolic cages on basic diet; lower in metabolic cages preventing coprophagy when fed diet enriched in cholate(Groen et al. 2006)
Bilirubin	Mouse	Blood	Drugs	●S: dose-related increase after 28d oral dosing wit fipronil(Abouelghar et al. 2020)
Bilirubin	Mouse	Blood	Drugs	●S: M; ~25 and 40% increase after 50 and 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
Bilirubin	Mouse	Blood	Other biological	●S: mildly lower in 129SV/EV than in C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)
Bilirubin	Mouse	Blood	Other biological	●P(Hep): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)

Bilirubin	Mouse	Blood	Stress	●B(?): ~x2 after repeated cold-stress for 7d(Hata et al. 1988)
Calcium (total)	Mouse	Blood	Drugs	●S: M; not different after 25, 50 and 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
Calcium (total)	Mouse	Blood	Food	●P(Hep): variably changed with duration and time of initiation of fasting in males(Jensen et al. 2019)
Calcium (total)	Mouse	Blood	Other biological	●P(Hep): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
Calcium (total)	Mouse	Blood	Other biological	●S: mildly lower in C57BL/6J than in 129SV/EV & C3H/HeJ strains(Mazzaccara et al. 2008)
Calcium (total)	Mouse	Blood	Other technical	●S: M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(Voros et al. 2021)
Catalase	Mouse	Blood	Drugs	●S: dose-related decrease after 28d oral dosing wit fipronil(Abouelghar et al. 2020)
Catalase	Mouse	Blood	Food	●S: not different in mice fed a mycotoxin contaminated diet(Hou et al. 2013)
Cells	Mouse	BAL	Housing	●F: not different when housed with low, medium and high thickness aspen chip bedding not changed for up to 17d; no difference for cell types(Rosenbaum et al. 2009)
Chloride	Mouse	Blood	Drugs	●S: M; not different after 25, 50 and 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
Chloride	Mouse	Blood	Food	●P(Hep): ~not changed according to duration and time of initiation of fasting in males(Jensen et al. 2019)
Chloride	Mouse	Blood	Other biological	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)
Chloride	Mouse	Blood	Other technical	●S: M/F; isoflurane anesthesia; healthy animals; not different 4h & 24h after 16% blood loss(Marx et al. 2015)
Cholesterol	Mouse	Blood	Drugs	●S: dose-related increase after 28d oral dosing wit fipronil(Abouelghar et al. 2020)
Cholesterol	Mouse	Blood	Drugs	●S: M; dose-related increase after 25, 50 and 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
Cholesterol	Mouse	Blood	Food	●P(Hep): variably with duration and time of initiation of fasting in males(Jensen et al. 2019)
Cholesterol	Mouse	Blood	Other biological	●S: lower in 129SV/EV & C57BL/6J than C3H/HeJ strains(Mazzaccara et al. 2008)
Cholesterol	Mouse	Blood	Other biological	●S: higher in obese Kunming, ICR, C57BL/6 and BALB/c after feeding a high fat diet(Li et al. 2020)
Cholesterol	Mouse	Blood	Other technical	●S: M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice, except lower in C3H males(Voros et al. 2021)
Cholesterol	Mouse	Blood	Sampling	●S(Sep): retroorbital with isoflurane vs submandibular without anesthesia; higher in submandibular specimens of 16 & 22wk-old mice(Fernandez et al. 2010)
Cholesterol	Mouse	Blood	Sampling	●S(+Sep): ~25% higher by tail clipping in unanesthetized than by cardiac puncture in xylazine/ketamine anesthetized(Chan et al. 2012)
Cholesterol	Mouse	Blood	Stress	●P(?): not different after 8wks of unpredictable mild stresses(Stanley et al. 2014)
Cholinesterase	Mouse	Blood	Other biological	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)
CK	Mouse	Blood	Drugs	●S: isoflurane anesthesia; retrororbital sampling; increased after cisplatin, busulfan or doxorubicin(Rix et al. 2020)
CK	Mouse	Blood	Food	●P(Hep): not changed according to duration and time of initiation of fasting in males(Jensen et al. 2019)
CK	Mouse	Blood	Other biological	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)
CK	Mouse	Blood	Other technical	●S: M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(Voros et al. 2021)
CK	Mouse	Blood	Stress	●P(Hep): time-related increase by tape immobilization; restraint increase more intense by cold exposure; not different after 3h intruder exposure(Sanchez et al. 2002)
Creatinine	Mouse	Blood	Drugs	●S: isoflurane anesthesia; retrororbital sampling; increased after cisplatin and doxorubicin, noy after busulfan(Rix et al. 2020)
Creatinine	Mouse	Blood	Drugs	●S: not different 24h after anesthesia with Ketamine–xylazine, Pentobarbital, Tiletamine–zolozapam, Isoflurane or Sevoflurane (Gibbs et al. 2019)
Creatinine	Mouse	Blood	Drugs	●S: dose-related increase after 28d oral dosing wit fipronil(Abouelghar et al. 2020)
Creatinine	Mouse	Blood	Food	●S: not different when drinking sterile or slightly acidic water(Inagaki et al. 2011)
Creatinine	Mouse	Blood	Food	●P(Hep): variably changed with duration and time of initiation of fasting in males(Jensen et al. 2019)
Creatinine	Mouse	Blood	Other biological	●P(Hep): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
Creatinine	Mouse	Blood	Other biological	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)
Creatinine	Mouse	Blood	Other technical	●S: M/F; isoflurane anesthesia; healthy animals; not different 4h & 24h after 16% blood loss(Marx et al. 2015)

Creatinine	Mouse	<i>Blood</i>	<i>Sampling</i>	●S(gel): retroorbital with isoflurane vs submandibular without anesthesia; higher in submandibular specimens of 8, 16 & 22wk-old mice(Fernandez et al. 2010)
Creatinine	Mouse	<i>Urine</i>	<i>Housing</i>	●U: time-related increase of daily excretion with duration of metabolic cage housing (25/30% after 3wks)(Kalliokoski et al. 2013)
Creatinine	Mouse	<i>Urine</i>	<i>Housing</i>	●U: not different in enriched and non-enriched cages(Hutchinson et al. 2012)
CRP	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)
CRP	Mouse	<i>Blood</i>	<i>Sampling</i>	●P(Hep): increased by daily samplings from lateral tail vein not from jugular vein(Shirasaki et al. 2012)
CRP	Mouse	<i>Blood</i>	<i>Sampling</i>	●P(Hep): higher from tail than jugular vein(Shirasaki et al. 2012)
DHEA	Mouse	<i>Feces</i>	<i>Housing</i>	●F: females; lower in separated pair housed mice than in single & group housed mice for 8wks(Hohlbaum et al. 2022)
DHEA	Mouse	<i>Hair</i>	<i>Housing</i>	●H: females; higher in separated pair housed mice than in single & group housed mice for 8wks(Hohlbaum et al. 2022)
DHEA	Mouse	<i>Hair</i>	<i>Housing</i>	●H: males; higher in mice bred in large groups than in pairs(Elmi et al. 2020)
Eosinophils	Mouse	<i>Blood</i>	<i>Housing</i>	●B(?): percentage not different in mice exposed to radiant catalytic ionization for sanitization and in controls(Niemiec et al. 2022)
Eosinophils	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
Eosinophils	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(Voros et al. 2021)
Eosinophils	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): not different in uncultured litters than in litters culled to 4 or 6(Paigen et al. 2014)
Eosinophils	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(EDTA): higher from tail than eye than heart(Nemzek et al. 2001)
Eosinophils	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(EDTA): not different in tail clipping and saphenous blood specimens(Abatan et al. 2008)
Eosinophils	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): stable up to 3d at 4°C(Ameri et al. 2011)
Eosinophils	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA) vs B(Hep): stable up to 72h in EDTA and Hep at 4°C(Wiedmeyer et al. 2007)
Eosinophils	Mouse	<i>Blood</i>	<i>Time variability</i>	●B(?): lower during dark than light period(Visscher and Halberg 1955)
Eosinophils	Mouse	<i>Blood</i>	<i>Time variability</i>	●B(?): circadian rhythm max. about 8am min. about 10pm(Visscher and Halberg 1955)
Epinephrin	Mouse	<i>Blood</i>	<i>Drugs</i>	●P(EGTA/GSH): E & NE not different after induction of isoflurane anesthesia in a red-tinted and a classical chamber(McKinney et al. 2022)
Epinephrin	Mouse	<i>Blood</i>	<i>Stress</i>	●S:E and NE increased by cold exposure(Hu et al. 2022)
Epinephrin	Mouse	<i>Blood</i>	<i>Stress</i>	●P(Hep): x5 increase 40 min after physical stress (defeat stress) not after emotional stress (witnessing defeat)(Nakatake et al. 2020)
Epinephrin	Mouse	<i>Blood</i>	<i>Stress</i>	●S: ~15% increase after 12h restraint stress(Tang et al. 2020)
Epinephrin	Mouse	<i>Blood</i>	<i>Stress</i>	●P(?): not different after forced swimming in rats submitted to intermittent fasting and controls(Lara-Padilla et al. 2015)
Epinephrin	Mouse	<i>Blood</i>	<i>Stress</i>	●S: ~5 fold increase after 6h restraint stress(Kim et al. 2020)
Erythropoietin	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: higher in C3H/HeN than in Jcl: ICR,BALB/cA, C57BL/6J & C3H/HeN strains(Ohkura et al. 2007)
Ferritin	Mouse	<i>Blood</i>	<i>Stress</i>	●S: not different after 10 days of "chronic unpredictable stress"(McDonald et al. 2019)
Fibrinogen	Mouse	<i>Blood</i>	<i>Time variability</i>	●P(Cit): no statistically significant circadian variations(Ohkura et al. 2007)
GGT	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)
Glucocorticoids	Mouse	<i>Blood</i>	<i>Drugs</i>	●P(Hep): not different after induction of isoflurane anesthesia in a red-tinted and a classical chamber(McKinney et al. 2022)
Glucocorticoids	Mouse	<i>Blood</i>	<i>Drugs</i>	●P(Hep): intensely increased 6h after isoflurane anesthesia; not back to base after 24h(Sadler and Bailey 2013, Sorensen et al. 2019)
Glucocorticoids	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: ~2 times lower after CO ₂ than methoxyflurane anesthesia(Shipp and Woodward 1998)
Glucocorticoids	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: increased for 1 & 4h after isoflurane anesthesia ± vasectomy(Jacobsen et al. 2012)
Glucocorticoids	Mouse	<i>Blood</i>	<i>Food</i>	●P(?): lower or unchanged with high-fat diet according to light-dark time(Mendoza et al. 2008)
Glucocorticoids	Mouse	<i>Blood</i>	<i>Food</i>	●S: not different in mice fed a regular and a high energy diet(Kalliokoski et al. 2012, Kalliokoski et al. 2015)
Glucocorticoids	Mouse	<i>Blood</i>	<i>Food</i>	●P(Hep): variably changed with duration and time of initiation of fasting in males(Jensen et al. 2019)
Glucocorticoids	Mouse	<i>Blood</i>	<i>Housing</i>	●P(Hep): not different in single or group (3) housed mice(Arndt et al. 2009)
Glucocorticoids	Mouse	<i>Blood</i>	<i>Housing</i>	●P(Hep): males; ~3 times higher in single- than group-housed mice(Bartolomucci et al. 2009)

Glucocorticoids	Mouse	Blood	Housing	<ul style="list-style-type: none"> ●P(?): ~no effects of housing enrichment with nesting material(<i>Van de Weerd et al. 1997</i>)
Glucocorticoids	Mouse	Blood	Housing	<ul style="list-style-type: none"> ●P(Hep): males; stable and moderately lower for 42d in single- than group-housed mice; increase after moderate psychological stress approx. 4 times more intense in single housed mice(<i>Bartolomucci et al. 2003</i>)
Glucocorticoids	Mouse	Blood	Housing	<ul style="list-style-type: none"> ●P(?): higher after 7, 28 or 70d when 10 animals housed per cage than at2 or 5 animals per cage in BALB/c not in C57BL/6(<i>Laber et al. 2008</i>)
Glucocorticoids	Mouse	Blood	Housing	<ul style="list-style-type: none"> ●P(?): higher on d1 and 7 not on d14 in mice housed in groups of 8 than of 2 or 4(<i>Peng et al. 1989</i>)
Glucocorticoids	Mouse	Blood	Housing	<ul style="list-style-type: none"> ●S: not different when housed in standard wood shaving cages, cloth mat flooring cages and cloth mat flooring cages with wooden block(<i>Kawakami et al. 2022</i>)
Glucocorticoids	Mouse	Blood	Other technical	<ul style="list-style-type: none"> ●P(?): not different when induction of isoflurane anesthesia performed in chamber with or without bedding; not different if repeated stab incisions(<i>Reiter et al. 2017</i>)
Glucocorticoids	Mouse	Blood	Other technical	<ul style="list-style-type: none"> ●P(EDTA): not different when co-housed with rats(<i>Greene et al. 2014</i>)
Glucocorticoids	Mouse	Blood	Other technical	<ul style="list-style-type: none"> ●P(Hep): increased after tail biopsy, except when immersion of tail in ice-cold ethanol before and bupivacaine after biopsy(<i>Dudley et al. 2016</i>)
Glucocorticoids	Mouse	Blood	Other technical	<ul style="list-style-type: none"> ●P(Hep): increased with order of sampling when acclimated 2wk, not 4wk(<i>Sakakibara et al. 2010</i>)
Glucocorticoids	Mouse	Blood	Other technical	<ul style="list-style-type: none"> ●P(?): not different in C57BL/6 J mice and CD1 mice kept under a fluorescent or light-emitting diode (LED)(<i>Alves-Simoes et al. 2016</i>)
Glucocorticoids	Mouse	Blood	Sampling	<ul style="list-style-type: none"> ●S: increased in blood collected by tail bleeding or decapitation after tail bleeding(<i>Tuli et al. 1995</i>)
Glucocorticoids	Mouse	Blood	Sampling	<ul style="list-style-type: none"> ●P(EDTA): unanesthetized; not different in tail clipping and saphenous blood specimens; not different after repetition an days 3,5, 6(<i>Abatan et al. 2008</i>)
Glucocorticoids	Mouse	Blood	Sampling	<ul style="list-style-type: none"> ●P(EDTA): maze test; not different in tail-picked and cup-hadled mice ; ~2.5 higher at 30 min than at 5 min (<i>Ghosal et al. 2015</i>)
Glucocorticoids	Mouse	Blood	Sampling	<ul style="list-style-type: none"> ●P(Hep): not different from tail and jugular vein(<i>Shirasaki et al. 2012</i>)
Glucocorticoids	Mouse	Blood	Sampling	<ul style="list-style-type: none"> ●P(Hep): not different in repeated daily samplings from jugular vein and lateral tail vein (<i>Shirasaki et al. 2012</i>)
Glucocorticoids	Mouse	Blood	Sampling	<ul style="list-style-type: none"> ●P(Hep): lower by unrestrained or restrained tail snip than anesthetized tail snip, retroorbital or cardiac sampling; increased by repeated tail snip(<i>Kim et al. 2018</i>)
Glucocorticoids	Mouse	Blood	Sampling	<ul style="list-style-type: none"> ●P(Hep): intensely increased 6h after sampling from retroorbital sinus and sublingual vein; not fully back to base after 2d; moderate changes by tail tip amputation or tail incision or sampling from saphenous vein (<i>Sadler and Bailey 2013, Sorensen et al. 2019</i>)
Glucocorticoids	Mouse	Blood	Sampling	<ul style="list-style-type: none"> ●P(Hep): lower from tail incision than by tail warming or warming cabinet technique; stable after repeated samplings(<i>Sadler and Bailey 2013</i>)
Glucocorticoids	Mouse	Blood	Sampling	<ul style="list-style-type: none"> ●P(Hep): lower from tail or by automatic sampling from carotid catheter than from cheek bleeding(<i>Teilmann et al. 2014</i>)
Glucocorticoids	Mouse	Blood	Sampling	<ul style="list-style-type: none"> ●P(EDTA): increase between 4 and 6 pm not different in controls and mice sampled by retrobulbar puncture; increase more intense by facial vein sampling(<i>Teilmann et al. 2014</i>)
Glucocorticoids	Mouse	Blood	Sampling	<ul style="list-style-type: none"> ●P(?): more increased by jugular than by retrobulbar, tail or saphenous sampling(<i>Tsai et al. 2015</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●S: decreased after 10 days of "chronic unpredictable stress"(<i>McDonald et al. 2019</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●S: not different after 7d daily mild random stress in females; increased in males(<i>Hickman 2017</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●S: constant lighting cycle; not different in spring and autumn; response to stress more intense in autumn(<i>Meyer et al. 2006</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●P(Hep): same concentration after 40 min restraint in controls and mice selectively bred for high voluntary wheel running having higher resting CS concentrations than controls(<i>Malisch et al. 2007</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●P(Hep): 40% higher by daily ultra light stress from d1 to d15 of pregnancy in females; not different from controls 3d post-partum(<i>Misdrabi et al. 2005</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●P(Hep): higher males and lower in females housed in enriched environment(<i>Tsai et al. 2003</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●S: increased by cold exposure(<i>Hu et al. 2022</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●P(?): increased after forced swimming in rats; not different in controls and rats fed on alternate days(<i>Lara-Padilla et al. 2015</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●S: increased after 15d daily restraint, forced swimming and low temp stress; not different after handling and isolation(<i>Bowers et al. 2008</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●P(Hep): ~4 times higher in mice housed in enriched environments(<i>Marashi et al. 2003</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●P(Hep): x2 increase 40 min after physical stress (defeat stress) not after emotional stress (witnessing defeat)(<i>Nakatake et al. 2020</i>)
Glucocorticoids	Mouse	Blood	Housing	<ul style="list-style-type: none"> ●P(Hep): males; increase higher in subordinates than in dominants after open field stress(<i>Bartolomucci et al. 2009</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●S: M; ketamine/xylazine IP anesthesia; chronic restrain by tail immobilization; time related increase up to day 10, then decrease; higher than in non immobilized controls(<i>Rogers et al. 2002</i>)
Glucocorticoids	Mouse	Blood	Stress	<ul style="list-style-type: none"> ●S: ~30% increase by sleep restriction(<i>Longordo et al. 2011</i>)

Glucocorticoids	Mouse	Blood	Stress	●P(EDTA): increased by repeated restraint and acoustic stress; after 1 restraint and acoustic stress, increase peaking at 2h, not back to base after 6h; after second daily stress, no increase; not different up to 6h after a single 100μL IP injection of saline(<i>Drude et al. 2011</i>)
Glucocorticoids	Mouse	Blood	Stress	●P(?): x2 increase after 1h immobilization moderately higher after 12hrs; concentrations lower in SPF than non SPF mice(<i>Nukina et al. 2001</i>)
Glucocorticoids	Mouse	Blood	Stress	●P(EDTA): ~4 times higher in mice deprived of sleep by 1h physical restraint than gentle handling(<i>Meerlo et al. 2001</i>)
Glucocorticoids	Mouse	Blood	Stress	●S: corticosterone and cortisol increased after acute or chronic restraint(<i>Oh et al. 2020</i>)
Glucocorticoids	Mouse	Blood	Stress	●S: less increased when trained to be handled; intensely increased by 1h restraint (not decreased by training)(<i>Tuli et al. 1995</i>)
Glucocorticoids	Mouse	Blood	Stress	●S: ~x6 after transfer from breeding unit to experimental room; back to base within 1d(<i>Tuli et al. 1995</i>)
Glucocorticoids	Mouse	Blood	Stress	●S: increased 15min after cage transfer; back to base at 1h(<i>Rasmussen et al. 2011</i>)
Glucocorticoids	Mouse	Blood	Stress	●S: ~5 fold increase after 6h restraint stress(<i>Kim et al. 2020</i>)
Glucocorticoids	Mouse	Blood	Stress	●S: cortisol not significantly increased after 12h restraint stress(<i>Tang et al. 2020</i>)
Glucocorticoids	Mouse	Blood	Stress	●P(EDTA+aprotinin): resting concentration higher in mice with high than intermediate or low stress reactivity(<i>Touma et al. 2008</i>)
Glucocorticoids	Mouse	Blood	Stress	●P(Hep): increased after 1wk unpredictable noise stress; not different after 4wks(<i>Kugler et al. 1990</i>)
Glucocorticoids	Mouse	Blood	Stress	●P(Hep): decapitation; ~2.5 higher increase after single 2min-shaking stress than after repeated shakings 45 times/d/7d(<i>Bernatova et al. 2002</i>)
Glucocorticoids	Mouse	Blood	Stress	●P(?): 8wks of unpredictable mild stresses; x~2 and 3 in males and females(<i>Stanley et al. 2014</i>)
Glucocorticoids	Mouse	Blood	Stress	●S: males; identical increase after 3h noise stress at 8am and 3pm(<i>Kim et al. 2008</i>)
Glucocorticoids	Mouse	Blood	Stress	●P(Hep): decapitation; immobilization; Increased from 15min ; max (~x5) at 60 min and stable till 360min(<i>Dong et al. 2004</i>)
Glucocorticoids	Mouse	Blood	Stress	●S: decapitation; x13 & x3 increase after 90min & 24h acute restraint stress; x2 and x4 increase after chronic (3d) repeated and unpredictable stress(<i>Kuti et al. 2022</i>)
Glucocorticoids	Mouse	Blood	Time variability	●P(?): circadian rhythm with peak ~11 am identical in single- and group-housed mice(<i>Nichols and Chevins 1981</i>)
Glucocorticoids	Mouse	Blood	Time variability	●P(Hep): max at end of light period; higher in mice selected for high wheel-running(<i>Malisch et al. 2008</i>)
Glucocorticoids	Mouse	Blood	Time variability	●S: same circadian variations of corticosterone and cortisol (~10% CS); peak at 8 pm(<i>Gong et al. 2015</i>)
Glucocorticoids	Mouse	Blood	Time variability	●S: circadian cycle peaking about 4 pm; lowest at night and early morning(<i>Halberg et al. 1959</i>)
Glucocorticoids	Mouse	Blood	Time variability	●S: peak 4hr after beginning of dark phase; minimum at end of dark phase(<i>Halberg et al. 1959</i>)
Glucocorticoids	Mouse	Blood	Time variability	●S: same circadian rhythm in Jcl: ICR,BALB/cA, C57BL/6J & C3H/HeN strains: peak & low at beginning of light & dark periods (<i>Ohkura et al. 2007</i>)
Glucocorticoids	Mouse	Blood	Time variability	●P(Hep): peak 8-12am shifted to 6pm in Clock mutants(<i>Oishi et al. 2006</i>)
Glucocorticoids	Mouse	Blood	Time variability	●P(Hep): ~3 times higher in the active (dark) than non-active (light) phase when cage care performed in the non-active phase; increased with order of sampling when cage care in the non-active phase but not after 4wks cage care during the active phase(<i>Sakakibara et al. 2010</i>)
Glucocorticoids	Mouse	Blood	Time variability	●P(Hep): lowest at end of dark period; highest at end of light period(<i>Harris et al. 2012</i>)
Glucocorticoids	Mouse	Blood	Time variability	●P(Hep):highest at 6pm, lowest at 6am(<i>Teilmann et al. 2014</i>)
Glucocorticoids	Mouse	Blood	Time variability	●P(Hep): ~4 times higher during active than non active phase of the day(<i>Sakakibara et al. 2010</i>)
Glucocorticoids	Mouse	Blood	Time variability	●S: males; ~3 times higher at 6pm than 8 or 11 am(<i>Kim et al. 2008</i>)
Glucocorticoids	Mouse	Blood	Time variability	●S: corticosterone and cortisol increased 1 h after restraint; cortisol remaining high after 24 and 48hrs, CS decreasing(<i>Gong et al. 2015</i>)
Glucocorticoids	Mouse	Feces	Drugs	●F: not different after single 45min isoflurane anesthesia; x1.5 after repeated anesthetics(<i>Hohlbaum et al. 2017</i>)
Glucocorticoids	Mouse	Feces	Drugs	●F: not different from controls after isoflurane anesthesia ± saline or meloxicam(<i>Wright-Williams et al. 2007</i>)
Glucocorticoids	Mouse	Feces	Drugs	●F: increased on first day and back to base on second day after anesthesia and IV tail injection in males not females; not different when performed IV performed in restrainer without anesthesia(<i>Resch et al. 2019</i>)
Glucocorticoids	Mouse	Feces	Exercise	●dF: higher in voluntary wheel running animals than in non runners(<i>Fuss et al. 2010</i>)
Glucocorticoids	Mouse	Feces	Food	●F: higher excretion in mice fed a regular than a high energy diet(<i>Kalliokoski et al. 2012</i>)
Glucocorticoids	Mouse	Feces	Food	●F: total excretion not different in mice fed a regular or a high energy diet; concentration increased(<i>Kalliokoski et al. 2015</i>)
Glucocorticoids	Mouse	Feces	Food	●F: daily amount excreted 40% higher in mice fed a high fat diet(<i>Teeple et al. 2023</i>)

Glucocorticoids	Mouse	Feces	Housing	●F: time-related decreased concentration for 2wks, then stable up to 1 mth in individually housed mice; no time-related difference in group housed mice; not different between singly and group housed mice after 1mth(<i>Hunt and Hambly 2006</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: not different according to cage density, sanitation frequency & bedding type(<i>Horn et al. 2012</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: not different at 1d in dams of uncultured litters and of litters culled to 4 or 6(<i>Paigen et al. 2014</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: increased with housing density(<i>Nicholson et al. 2009, Touma et al. 2008, Touma et al. 2009</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: not different in pups bred in intact or culled litters according to housing density recommendations(<i>O'Malley et al. 2008</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: males; not different in single, paired and group cages(<i>Hohlbaum et al. 2020</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: (feces collected weekly) not different with type of cage and density of mice (1 to 12 per cage)(<i>Bundgaard et al. 2012</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: not affected by density (1 to 5 per cage) or ambient temperature (22, 26 & 30°C)(<i>Toth et al. 2015</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: not different when in enriched or standard environment in BALB/c & C57BL/6 mice ; higher during dark than light phase(<i>Clipperton-Allen et al. 2015</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: higher in controls in standard cages than in mice housed from 2wks in standard cage + exercising wheel or in larger cages with or without exercising wheel(<i>Gurfein et al. 2012</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: females; not different when housed as single, paired separated or group mice for 8wks(<i>Hohlbaum et al. 2022</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: not different when housed with low, medium and high thickness aspen chip bedding not changed for up to 17d(<i>Rosenbaum et al. 2009</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: concentration not different according to cage area available, level of cage or density(<i>Bailoo et al. 2018</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: daily excretion approx. 10 times higher in mice housed in metabolic cage than in controls(<i>Kalliokoski et al. 2013</i>)
Glucocorticoids	Mouse	Feces	Housing	●F: decreased for the 3 first days of separation, then stable
Glucocorticoids	Mouse	Feces	Other biological	●F: total excretion lower on day following surgery for catheter placement; concentration moderately higher (decreased amount of feces)(<i>Sundbom et al. 2011</i>)
Glucocorticoids	Mouse	Feces	Other biological	●F: increase peaking 6-9h following isoflurane anesthesia; alleviated by pretreatment with meloxicam 20 mg/kg(<i>Wright-Williams et al. 2007</i>)
Glucocorticoids	Mouse	Feces	Other biological	●F: not different for 3d in isoflurane anesthetized mice and anesthetized+vasectomy mice(<i>Jacobsen et al. 2012</i>)
Glucocorticoids	Mouse	Feces	Sampling	●F: spot specimens; lower after daily injection of 0.5 mL saline IP for 30d than in controls or after abdominal puncture(<i>Davis et al. 2014</i>)
Glucocorticoids	Mouse	Feces	Sampling	●F: not different from controls 24h after single blood collection(<i>Harikrishnan et al. 2018</i>)
Glucocorticoids	Mouse	Feces	Sampling	●F: not different in specimens collected after manual tail , forceps tail or tube handling(<i>Mertens et al. 2019</i>)
Glucocorticoids	Mouse	Feces	Sampling	●F: lower in mice sampled from tail or by automatic sampling from carotid catheter than from facial vein bleeding(<i>Teilmann et al. 2014</i>)
Glucocorticoids	Mouse	Feces	Stress	●F: transient increase 7-10h after vibrations (mimicking train) in females not in males(<i>Atanasov et al. 2015</i>)
Glucocorticoids	Mouse	Feces	Stress	●F: higher than in controls after oral gavage not after pill ingestion(<i>Walker et al. 2012</i>)
Glucocorticoids	Mouse	Feces	Stress	●F: daily variation attenuated after exposition to alarm strobe light(<i>Godfrey and Silverman 2009</i>)
Glucocorticoids	Mouse	Feces	Stress	●F: not different from controls during 32h following a 1h exposition to a medium intensity noise(<i>Jensen et al. 2010</i>)
Glucocorticoids	Mouse	Feces	Time variability	●F: max 8-10am, min 8-10pm(<i>Bardi et al. 2010</i>)
Glucocorticoids	Mouse	Feces	Time variability	●F: highest at beginning of dark phase ; lowest during light phase(<i>Touma et al. 2008, Touma et al. 2009</i>)
Glucocorticoids	Mouse	Feces	Time variability	●F: F; individual ventilated cages; not different when in enriched or standard environment in BALB/c & C57BL/6 mice ; higher during dark than light phase(<i>Clipperton-Allen et al. 2015</i>)
Glucocorticoids	Mouse	Feces	Time variability	●F: lower in feces collected at 3 pm than 9 am(<i>Godfrey and Silverman 2009</i>)
Glucocorticoids	Mouse	Feces	Time variability	●F: peak elimination 10 and 4 h after injection of corticosterone at 9am or 9pm(<i>Touma et al. 2003</i>)
Glucocorticoids	Mouse	Hair	Drugs	●H: not different after repeated 45min isoflurane anesthetics(<i>Hohlbaum et al. 2017</i>)
Glucocorticoids	Mouse	Hair	Housing	●H: males; not different in single, paired and group cages(<i>Hohlbaum et al. 2020</i>)
Glucocorticoids	Mouse	Hair	Housing	●H: females; not different in mice housed as group or single & paired separated for 8wks(<i>Hohlbaum et al. 2022</i>)
Glucocorticoids	Mouse	Hair	Housing	●H: males; not different in mice bred in large groups or in pairs(<i>Elmi et al. 2020</i>)
Glucocorticoids	Mouse	Hair	Food	●H: 40-50% increase in mice fed a high fat diet for 4wks(<i>Teeples et al. 2023</i>)
Glucocorticoids	Mouse	Hair	Stress	●H: females; increased by social instability (alternating single and group housing); back to base after recovery(<i>Jarcho et al. 2016</i>)

Glucocorticoids	Mouse	<i>Saliva</i>	<i>Sampling</i>	●Saliva: increased by restraint in anesthetized male mice(<i>Nohara et al. 2016</i>)
Glucocorticoids	Mouse	<i>Urine</i>	<i>Housing</i>	●U: corticosterone/Cr lower in enriched environment(<i>van Loo et al. 2004</i>)
Glucocorticoids	Mouse	<i>Urine</i>	<i>Housing</i>	●U: males; corticosterone/Cr higher in group than single-housed mice(<i>Kamakura et al. 2016</i>)
Glucocorticoids	Mouse	<i>Urine</i>	<i>Housing</i>	●U: corticosterone/Cr higher in mice raised with nesting material than without (<i>Hutchinson et al. 2012</i>)
Glucocorticoids	Mouse	<i>Blood</i>	<i>Housing</i>	●U: Corticosterone/creat: no effects of housing enrichment with nesting material(<i>Van de Weerd et al. 1997</i>)
Glucocorticoids	Mouse	<i>Urine</i>	<i>Housing</i>	●U: corticosterone/Cr higher in shelter housing than control or housing with nesting(<i>van Loo et al. 2002</i>)
Glucocorticoids	Mouse	<i>Urine</i>	<i>Other biological</i>	●U: peak elimination 2 and 3h after injection of corticosterone at 9am or 9pm(<i>Touma et al. 2003</i>)
Glucocorticoids	Mouse	<i>Urine</i>	<i>Time variability</i>	●U: males; corticosterone/Cr max (x100) at end of light period(<i>Kamakura et al. 2016</i>)
Glucocorticoids	Mouse	<i>Urine</i>	<i>Time variability</i>	●U: corticosterone/Cr higher when light/dark cycle disturbed(<i>van der Meer et al. 2004</i>)
Glucocorticoids	Mouse	<i>Urine</i>	<i>Time variability</i>	●U: corticosterone/Cr peaking at beginning of dark phase of lighting; increased 90min after stress (IP injection at time of peak or trough)(<i>Thorpe et al. 2012</i>)
Glucose	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: M; >50% increase after 100 mg/L corticosterone in drinking water for 25d(<i>Cassano et al. 2012</i>)
Glucose	Mouse	<i>Blood</i>	<i>Food</i>	●P(implanted probe): intensely decreased by fasting during the first 90 min after initial increase due to researcher intervention then decreased slowly up to 16h(<i>Kennard et al. 2022</i>)
Glucose	Mouse	<i>Blood</i>	<i>Food</i>	●P(?): 15% higher with high-fat diet(<i>Mendoza et al. 2008</i>)
Glucose	Mouse	<i>Blood</i>	<i>Food</i>	●P(Hep): variably decreased with duration and time of initiation of fasting in males(<i>Jensen et al. 2019</i>)
Glucose	Mouse	<i>Blood</i>	<i>Other biological</i>	●P(Hep): higher in male CYP2C18&19 humanized mice model than wild-type; not different in females(<i>Lofgren et al. 2008</i>)
Glucose	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(Hep): increased after tail biopsy, except when immersion of tail in ice-cold ethanol before and bupivacaine after biopsy(<i>Dudley et al. 2016</i>)
Glucose	Mouse	<i>Blood</i>	<i>Other technical</i>	●S: M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(<i>Voros et al. 2021</i>)
Glucose	Mouse	<i>Blood</i>	<i>Other technical</i>	●S: M/F; isoflurane anesthesia; healthy animals; not different at 4h & 24h after 16% blood loss(<i>Marx et al. 2015</i>)
Glucose	Mouse	<i>Blood</i>	<i>Other technical</i>	●S: lower in 129SV/EV, than C57BL/6J or C3H/HeJ strains(<i>Mazzaccara et al. 2008</i>)
Glucose	Mouse	<i>Blood</i>	<i>Sampling</i>	●P(EDTA): increased 3.5 mmol/L by repeated retroorbital sampling(<i>Christensen et al. 2009</i>)
Glucose	Mouse	<i>Blood</i>	<i>Sampling</i>	●S(gel): retroorbital with isoflurane vs submandibular without anesthesia; lower in submandibular specimens of 16 & 22wk-old mice(<i>Fernandez et al. 2010</i>)
Glucose	Mouse	<i>Blood</i>	<i>Sampling</i>	●S: lower from saphenous than from tail vein; increased by repeated sampling 4 times at 30min interval(<i>Aasland et al. 2010</i>)
Glucose	Mouse	<i>Blood</i>	<i>Sampling</i>	●S(+Sep): ~80% lower by tail clipping in unanesthetized than by cardiac puncture in xylazine/ketamine anesthetized(<i>Chan et al. 2012</i>)
Glucose	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(POCT): not different in specimens collected after manual tail , forceps tail or tube handling(<i>Mertens et al. 2019</i>)
Glucose	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(POCT): not different in specimens from facial vein, tail vein incision or tail tip clipping(<i>Moore et al. 2017</i>)
Glucose	Mouse	<i>Blood</i>	<i>Sampling</i>	●B: increased by handling, transportation, anesthesia(<i>Tabata et al. 1998</i>)
Glucose	Mouse	<i>Blood</i>	<i>Sampling</i>	●B: not different in second specimen after 90min by retroorbital puncture(<i>Holmberg et al. 2011</i>)
Glucose	Mouse	<i>Blood</i>	<i>Sampling</i>	●P(Hep): lower in retrobulbar than tail vein specimen of unanesthetized mice(<i>Rogers et al. 1999</i>)
Glucose	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(POCT): maze test; more increased in mice trained to be tail-picked than cup-handled(<i>Ghosal et al. 2015</i>)
Glucose	Mouse	<i>Blood</i>	<i>Stress</i>	●P(?): 8wks of unpredictable mild stresses; not significantly increased(<i>Stanley et al. 2014</i>)
Glucose	Mouse	<i>Blood</i>	<i>Stress</i>	●B: increased by handling, transportation, anesthesia(<i>Tabata et al. 1998</i>)
Glucose	Mouse	<i>Blood</i>	<i>Stress</i>	●S: decapitation; x2 & x1.5 increase after 90min & 24h acute restraint stress; ~not different after chronic (3d) repeated or un predictable stress(<i>Kuti et al. 2022</i>)
GPx	Mouse	<i>Blood</i>	<i>Food</i>	●S: not significantly increased in mice fed a mycotoxin contaminated diet(<i>Hou et al. 2013</i>)
GTT	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: OGTT; higher base glucose concentration and slower clearance in obese Kunming, ICR, C57BL/6 and BALB/c after feeding a high fat diet(<i>Li et al. 2020</i>)
GTT	Mouse	<i>Blood</i>	<i>Other technical</i>	●P(implanted probe): higher peak and slower clearance of glucose after administration by gavage or self-administration by oral gel: glucose clearance variable according to duration of fast, change of cage, etc.(<i>Kennard et al. 2022</i>)
GTT	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(POCT): maze test; AUC larger in mice trained to be tail-picked than cup-handled(<i>Ghosal et al. 2015</i>)

GTT	Mouse	<i>Blood</i>	<i>Stress</i>	●P(Hep): OGTT; glucose clearance slower in restrained mice than in controls(<i>Tsai et al. 2011</i>)
HDL	Mouse	<i>Blood</i>	<i>Sampling</i>	●S(+Sep): ~25% higher by tail clipping in unanesthetized than by cardiac puncture in xylazine/ketamine anesthetized(<i>Chan et al. 2012</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Anticoagulant</i>	●B(EDTA) & B(Hep): not different(<i>Moorhead et al. 2016</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(Hep): dose-related decrease after 28d oral dosing wit fipronil(<i>Abouelghar et al. 2020</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(Hep): not different after feeding fenbendazole supplemented diet for up to 9wks(<i>Cray et al. 2008</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(EDTA): M; <15% increase after 25, 50, 100 mg/L corticosterone in drinking water for 25d(<i>Cassano et al. 2012</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Housing</i>	●B(?): not different in mice exposed to radiant catalytic ionization for sanitization and in controls(<i>Niemiec et al. 2022</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(Hep): 30% decrease 6d after 3Gy whole body X-ray irradiation(<i>Sun et al. 2018</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(?): lower in C3H/HeN than in Jcl: ICR,BALB/cA, C57BL/6J & C3H/HeN strains(<i>Ohkura et al. 2007</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): lower in C3H/HeJ than in 129SV/EV & C57BL/6J strains(<i>Mazzaccara et al. 2008</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(Hep): ~not different in A/J , BALB/c, C57BL/6 strains; not different with enriched vs. standard housing(<i>Tsai et al. 2002</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(<i>Lofgren et al. 2008</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): slightly higher in unculled litters than in litters culled to 4 or 6(<i>Paigen et al. 2014</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): M/F: retroorbital sampling after fentanyl citrate sedation; not different after 6 weekly blood sampling of 15% BW in males and 20% BW in females(<i>Raabe et al. 2011</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): not different after up to 1/5 dilution of specimen(<i>Moorhead et al. 2016</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(<i>Voros et al. 2021</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(?): not different from controls after daily abdominal puncture or 0.5 mL saline IP in females(<i>Davis et al. 2014</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(EDTA): higher from tail than eye than heart(<i>Nemzek et al. 2001</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Sampling</i>	●P(Hep): hemolysis lower in jugular vein than lateral tail vein specimen(<i>Shirasaki et al. 2012</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(EDTA): ~250 µL weekly; retrobulbar isoflurane vs /facial veine without anesthesia; not different & stable for 6 wks(<i>Frohlich et al. 2018</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Sampling</i>	●P(Hep): higher from tail than jugular vein(<i>Shirasaki et al. 2012</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): stable up to 3d at 4°C(<i>Ameri et al. 2011</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA) vs B(Hep): stable up to 72h in EDTA at 4°C, time-related increase in Hep(<i>Wiedmeyer et al. 2007</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): not different up to 1d at 4°C and 2d at room temp.(<i>Layssol-Lamour et al. 2019</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Stress</i>	●B(Hep): not different in enriched environment; increased inter-individual variability(<i>Tsai et al. 2003</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Stress</i>	●B(?): marginally decreased after 10 days of “chronic unpredictable stress”(McDonald et al. 2019)
Hemoglobin	Mouse	<i>Blood</i>	<i>Stress</i>	●B(?): increased by repeated cold-stress during 7d and by other stresses(<i>Hata et al. 1988</i>)
Hemoglobin	Mouse	<i>Blood</i>	<i>Time variability</i>	●B(Hep): peak at midday shifted and decreased to 6am in Clock mutants(<i>Oishi et al. 2006</i>)
IgA	Mouse	<i>BAL</i>	<i>Sampling</i>	●S: ~10% decrease after 12h restraint stress(<i>Tang et al. 2020</i>)
IgA	Mouse	<i>Feces</i>	<i>Housing</i>	●F: (feces collected weekly) not different with type of cage and density of mice (1 to 12 per cage); decreasing for 4wks after change of cage, except in isolated females(<i>Bundgaard et al. 2012</i>)
IL-6	Mouse	<i>Blood</i>	<i>Stress</i>	●P(?): SPF mice: x7 increase after 1h immobilization; x5 after 6 or 12hrs(<i>Nukina et al. 2001</i>)
Insulin	Mouse	<i>Blood</i>	<i>Food</i>	●P(?): ~1.5-2 times higher with high-fat diet(<i>Mendoza et al. 2008</i>)
Insulin	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: not affected by sleep fragmentation(<i>Trammell et al. 2014</i>)
Insulin	Mouse	<i>Blood</i>	<i>Other technical</i>	●S: not affected by density (1 to 5 per cage) and ambient temperature (22, 26 & 30°C)(<i>Toth et al. 2015</i>)
Insulin	Mouse	<i>Blood</i>	<i>Sampling</i>	●P(Hep): lower in retrobulbar than tail vein specimen of unanesthetized mice(<i>Rogers et al. 1999</i>)
Insulin	Mouse	<i>Blood</i>	<i>Stress</i>	●P(?): 8wks of unpredictable mild stresses; x4(<i>Stanley et al. 2014</i>)
Iron	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: lower in C57BL/6J than in 129SV/EV & C3H/HeJ strains(<i>Mazzaccara et al. 2008</i>)
Iron	Mouse	<i>Blood</i>	<i>Stress</i>	●S: concentration decreased after 10 days of “chronic unpredictable stress”; TIBC not different(<i>McDonald et al. 2019</i>)

KIM-1	Mouse	Urine	Drugs	●U: Increased at 6h then decreased 12h after anesthesia with ketamine–xylazine, almost unchanged with Pentobarbital; decreased after Tiletamine–zolazepam, Isoflurane or Sevoflurane (<i>Gibbs et al. 2019</i>)
LDH	Mouse	Blood	Food	●P(Hep): ~not different with duration and time of initiation of fasting in males(<i>Jensen et al. 2019</i>)
LDH	Mouse	Blood	Other biological	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(<i>Mazzaccara et al. 2008</i>)
LDH	Mouse	Blood	Stress	●P(Hep): time-related increase by tape immobilization; restraint increase more intense by cold exposure; moderate increase after 3h intruder exposure(<i>Sanchez et al. 2002</i>)
LDL	Mouse	Blood	Other biological	●S: higher in obese Kunming, ICR, C57BL/6 and BALB/c after feeding a high fat diet(<i>Li et al. 2020</i>)
Leptin	Mouse	Blood	Food	●P(?): ~2.5 times higher with high-fat diet(<i>Mendoza et al. 2008</i>)
Leptin	Mouse	Blood	Food	●S: time related increase in mice fed a high-fat diet(<i>Trottier et al. 2012</i>)
Leptin	Mouse	Blood	Other biological	●S: lower when sleep fragmentation(<i>Trammell et al. 2014</i>)
Leptin	Mouse	Blood	Other technical	●S: not affected by density (1 to 5 per cage); higher at high ambient temperature (22, 26 & 30°C)(<i>Toth et al. 2015</i>)
LH	Mouse	Blood	Stress	●P(Hep): decapitation; immobilization; not different up to 360min(<i>Dong et al. 2004</i>)
Lipase & PLI	Mouse	Blood	Other biological	●S: not different in 129SV/EV, C57BL/6J or C3H/HeJ strains(<i>Mazzaccara et al. 2008</i>)
Lipocalin	Mouse	Urine	Drugs	●U: decreased 6h after anesthesia with Ketamine–xylazine, almost unchanged with Pentobarbital, Tiletamine–zolazepam, Isoflurane or Sevoflurane (<i>Gibbs et al. 2019</i>)
Lymphocytes	Mouse	Blood	Drugs	●B(Hep): dose-related decrease of percentage after 28d oral dosing wit fipronil(<i>Abouelghar et al. 2020</i>)
Lymphocytes	Mouse	Blood	Drugs	●B(EDTA): M; ~20 and 7% decrease after 50 and 100 mg/L corticosterone in drinking water for 25d(<i>Cassano et al. 2012</i>)
Lymphocytes	Mouse	Blood	Drugs	●B(EDTA): M; 0.1 mL PEG400, SC; cardiac puncture 2d after injection; not different in isoflurane anesthetized & non anesthetized mice(<i>Jacobsen et al. 2004</i>)
Lymphocytes	Mouse	Blood	Food	●B(EDTA): time related increase in mice fed a high-fat diet(<i>Trottier et al. 2012</i>)
Lymphocytes	Mouse	Blood	Housing	●B(?): higher ofrom d1 to d14 in mice housed in groups of 4 than of 2 or 8(<i>Peng et al. 1989</i>)
Lymphocytes	Mouse	Blood	Housing	●B(?): percentage not different in mice exposed to radiant catalytic ionization for sanitization and in controls(<i>Niemiec et al. 2022</i>)
Lymphocytes	Mouse	Blood	Other biological	●B(Hep): dose- and time related decrease after whole body irradiation(<i>Shimura et al. 2020</i>)
Lymphocytes	Mouse	Blood	Other biological	●F: not different when in enriched or standard environment in BALB/c & C57BL/6 (<i>Clipperton-Allen et al. 2015</i>)
Lymphocytes	Mouse	Blood	Other biological	●B(Hep): subtype counts different in same strain from two different vendors(<i>Kajioka et al. 2000</i>)
Lymphocytes	Mouse	Blood	Other biological	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(<i>Lofgren et al. 2008</i>)
Lymphocytes	Mouse	Blood	Other technical	●B(EDTA): F; isoflurane anesthesia; not different after 3mth exposure to various housing enrichments, except lower in mice given a red igloo(<i>Peveler et al. 2019</i>)
Lymphocytes	Mouse	Blood	Other technical	●B(EDTA): M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(<i>Voros et al. 2021</i>)
Lymphocytes	Mouse	Blood	Other technical	●B(?): M/F; isoflurane anesthesia; healthy animals; ~50% decrease at 4h & 60% increase at 24h after 16% blood loss(<i>Marx et al. 2015</i>)
Lymphocytes	Mouse	Blood	Other technical	●B(EDTA): not different in uncultured litters than in litters culled to 4 or 6(<i>Paigen et al. 2014</i>)
Lymphocytes	Mouse	Blood	Sampling	●B(EDTA): 20% higher in tail clipping than saphenous blood specimens(<i>Abatan et al. 2008</i>)
Lymphocytes	Mouse	Blood	Sampling	●B(?): not different from controls after daily abdominal puncture or 0.5 mL saline IP in females(<i>Davis et al. 2014</i>)
Lymphocytes	Mouse	Blood	Sampling	●B(EDTA): ~250 µL weekly; retrobulbar isoflurane vs /facial veine without anesthesia; not different & stable for 5wks, decreased on 6 th wk(<i>Frohlich et al. 2018</i>)
Lymphocytes	Mouse	Blood	Sampling	●B(Hep): methoxyflurane anesthesia; %ge lower from cardiac puncture than in saphenous and tail veins specimens in males not females(<i>Doeing et al. 2003</i>)
Lymphocytes	Mouse	Blood	Sampling	●B(EDTA): higher from tail than eye than heart(<i>Nemzek et al. 2001</i>)
Lymphocytes	Mouse	Blood	Stability	●B(EDTA): stable up to 3d at 4°C(<i>Ameri et al. 2011</i>)
Lymphocytes	Mouse	Blood	Stability	●B(EDTA) vs B(Hep): increased with time up to 72h in EDTA at 4°C, decreased in Hep(<i>Wiedmeyer et al. 2007</i>)
Lymphocytes	Mouse	Blood	Stability	●B(EDTA): not different up to 2d at 4°C and room temp.(<i>Layssol-Lamour et al. 2019</i>)
Lymphocytes	Mouse	Blood	Stress	●B(?): decreased after 10 days of “chronic unpredictable stress”(<i>McDonald et al. 2019</i>)

Lymphocytes	Mouse	<i>Blood</i>	<i>Stress</i>	●B(EDTA):males; decreased by repetitive social stress (aggressive male intruder) for 2, 4 and 6d (<i>Engler et al. 2004</i>)
Lymphocytes	Mouse	<i>Blood</i>	<i>Stress</i>	●B(Hep): decreased after 1d or 25d daily restraint, low temp or isolation; not different after forced swim; decrease 2h after injection of 100μL saline, back to base after 6h(<i>Bowers et al. 2008</i>)
Lymphocytes	Mouse	<i>Blood</i>	<i>Stress</i>	●B(EDTA):not different after 7d daily mild random stress; Neutrophils/Lymphocytes ratio increased(<i>Hickman 2017</i>)
Lymphocytes	Mouse	<i>Blood</i>	<i>Time variability</i>	●B(Hep): peak 6am shifted and decreased to 9am in Clock mutants(<i>Oishi et al. 2006</i>)
Magnesium (total)	Mouse	<i>Blood</i>	<i>Other technical</i>	●S: M/F; isoflurane anesthesia; healthy animals; not different 4h & 24h after 16% blood loss(<i>Marx et al. 2015</i>)
MCH	Mouse	<i>Blood</i>	<i>Anticoagulant</i>	●B(EDTA) & B(Hep): not different(<i>Moorhead et al. 2016</i>)
MCH	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(Hep): dose-related decrease after 28d oral dosing wit fipronil(<i>Abouelghar et al. 2020</i>)
MCH	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(Hep): not different after feeding fenbendazole supplemented diet for up to 9wks(<i>Cray et al. 2008</i>)
MCH	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in uncultured litters than in litters culled to 4 or 6(<i>Paigen et al. 2014</i>)
MCH	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(?): higher in C3H/HeN than in Jcl: ICR,BALB/cA, C57BL/6J & C3H/HeN strains(<i>Ohkura et al. 2007</i>)
MCH	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(<i>Lofgren et al. 2008</i>)
MCH	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): increased (not significantly) by up to 1/5 dilution of specimen(<i>Moorhead et al. 2016</i>)
MCH	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): stable up to 3d at 4°C(<i>Ameri et al. 2011</i>)
MCH	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA) vs B(Hep): stable up to 72h in EDTA and Hep at 4°C(<i>Wiedmeyer et al. 2007</i>)
MCH	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): not different up to 2d at 4°C and room temp.(<i>Layssol-Lamour et al. 2019</i>)
MCHC	Mouse	<i>Blood</i>	<i>Anticoagulant</i>	●B(EDTA): lower than B(Hep)(<i>Moorhead et al. 2016</i>)
MCHC	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(Hep): dose-related increase after 28d oral dosing wit fipronil(<i>Abouelghar et al. 2020</i>)
MCHC	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(Hep): not different after feeding fenbendazole supplemented diet for up to 9wks(<i>Cray et al. 2008</i>)
MCHC	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(Hep): not different after whole body X-ray irradiation(<i>Sun et al. 2018</i>)
MCHC	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): ~not different in uncultured litters & in litters culled to 4 or 6(<i>Paigen et al. 2014</i>)
MCHC	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(<i>Lofgren et al. 2008</i>)
MCHC	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): increased by 1/5 dilution of specimen(<i>Moorhead et al. 2016</i>)
MCHC	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(?): not different from controls after daily abdominal puncture or 0.5 mL saline IP in females(<i>Davis et al. 2014</i>)
MCHC	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): not different up to 2d at 4°C and 6h at room temp.(<i>Layssol-Lamour et al. 2019</i>)
MCHC	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA) vs B(Hep): stable up to 72h in EDTA and Hep at 4°C(<i>Wiedmeyer et al. 2007</i>)
MCHC	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): increased from 1 st d at 4°C(<i>Ameri et al. 2011</i>)
MCV	Mouse	<i>Blood</i>	<i>Anticoagulant</i>	●B(EDTA): higher than B(Hep)(<i>Moorhead et al. 2016</i>)
MCV	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(Hep): dose-related decrease after 28d oral dosing wit fipronil(<i>Abouelghar et al. 2020</i>)
MCV	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(Hep): not different after feeding fenbendazole supplemented diet for up to 9wks(<i>Cray et al. 2008</i>)
MCV	Mouse	<i>Blood</i>	<i>Housing</i>	●B(?): not different in mice exposed to radiant catalytic ionization for sanitization and in controls(<i>Niemiec et al. 2022</i>)
MCV	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in uncultured litters than in litters culled to 4 or 6(<i>Paigen et al. 2014</i>)
MCV	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(?): higher in C3H/HeN than in Jcl: ICR,BALB/cA, C57BL/6J & C3H/HeN strains(<i>Ohkura et al. 2007</i>)
MCV	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(<i>Lofgren et al. 2008</i>)
MCV	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): M/F: retroorbital sampling after fentanyl citrate sedation; time-dependent increase during 6 weekly blood sampling of 15% and 20%(<i>Raabe et al. 2011</i>)
MCV	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): increased by up to 1/5 dilution of specimen(<i>Moorhead et al. 2016</i>)
MCV	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(?): not different from controls after daily abdominal puncture or 0.5 mL saline IP in females(<i>Davis et al. 2014</i>)
MCV	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(EDTA): higher from tail than eye than heart(<i>Nemzek et al. 2001</i>)
MCV	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): increased from 1 st d at 4°C(<i>Ameri et al. 2011</i>)

MCV	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA) vs B(Hep): stable up to 72h in EDTA and Hep at 4°C(Wiedmeyer et al. 2007)
MCV	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): not different up to 2d at 4°C and 6h at room temp.(Layssol-Lamour et al. 2019)
MDA	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: dose-related increase after 28d oral dosing wit fipronil(Abouelghar et al. 2020)
MDA	Mouse	<i>Blood</i>	<i>Food</i>	●S: intensely increased in mice fed a mycotoxin contaminated diet(Hou et al. 2013)
MDA	Mouse	<i>Blood</i>	<i>Stress</i>	●S: increased after acute or chronic restraint(Oh et al. 2020)
Melatonin	Mouse	<i>Blood</i>	<i>Time variability</i>	●P(?): M/F; maximum at midnight, minimum at midday; peak ~6 times mmore intense in C3H but not in C57BL/6 and BALB/c when exposed to white light emitting diodes than conventional lighting(Dauchy et al. 2019)
Monocytes	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(EDTA): M; irregular non significant variations after 25, 50 and 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
Monocytes	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(EDTA): M; 0.1 mL PEG400, SC; cardiac puncture 2d after injection; not different in isoflurane anesthetized & non anesthetized mice(Jacobsen et al. 2004)
Monocytes	Mouse	<i>Blood</i>	<i>Food</i>	●B(EDTA): not different in mice fed a high-fat diet for up to 6mths(Trottier et al. 2012)
Monocytes	Mouse	<i>Blood</i>	<i>Food</i>	●B(?): M; percentage 75% higher in males fed a fat-enriched diet for 24wks than in controls(McFarlin et al. 2012)
Monocytes	Mouse	<i>Blood</i>	<i>Housing</i>	●B(?): percentage not different in mice exposed to radiant catalytic ionization for sanitization and in controls(Niemiec et al. 2022)
Monocytes	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(Hep): dose- and time related decrease after whole body irradiation(Shimura et al. 2020)
Monocytes	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in uncultured litters than in litters culled to 4 or 6(Paigen et al. 2014)
Monocytes	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
Monocytes	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(Voros et al. 2021)
Monocytes	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(EDTA): not different in tail clipping and saphenous blood specimens(Abatan et al. 2008)
Monocytes	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(EDTA): ~250 µL weekly; retrobulbar isoflurane vs /facial veine without anesthesia; not different & stable for 6wks(Frohlich et al. 2018)
Monocytes	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(?): not different from controls after daily abdominal puncture or 0.5 mL saline IP in females(Davis et al. 2014)
Monocytes	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(EDTA): higher from tail than eye than heart(Nemzek et al. 2001)
Monocytes	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): decreased from 1 st d at 4°C(Ameri et al. 2011)
Monocytes	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA) vs B(Hep): stable up to 72h in EDTA at 4°C, decreased in Hep(Wiedmeyer et al. 2007)
Monocytes	Mouse	<i>Blood</i>	<i>Stress</i>	●B(EDTA):males; time-related increase by repetitive social stress (aggressive male intruder) for 2, 4 and 6d (Engler et al. 2004)
Monocytes	Mouse	<i>Blood</i>	<i>Stress</i>	●B(EDTA): increased after repeated social defeat stress (male intruder)(Ishikawa et al. 2021)
Monocytes	Mouse	<i>Blood</i>	<i>Stress</i>	●B(?): decreased after 10 days of “chronic unpredictable stress”(McDonald et al. 2019)
MPV	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in uncultured litters than in litters culled to 4 or 6(Paigen et al. 2014)
MPV	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): increased from 1 st d at 4°C(Ameri et al. 2011)
MPV	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): increased from 6h at 4°C and 1d at room temp.(Layssol-Lamour et al. 2019)
NEFA	Mouse	<i>Blood</i>	<i>Food</i>	●S: lower in fed than fasting, not different when high fat diet(Parks et al. 2005)
Neutrophils	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(EDTA): M; ~ 50 and 10% increase after 50 and 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
Neutrophils	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(EDTA): M; 0.1 mL PEG400, SC; cardiac puncture 2d after injection; 27% lower in isoflurane anesthetized than non anesthetized mice(Jacobsen et al. 2004)
Neutrophils	Mouse	<i>Blood</i>	<i>Food</i>	●B(EDTA): increased in mice fed a high-fat diet for 6mths(Trottier et al. 2012)
Neutrophils	Mouse	<i>Blood</i>	<i>Housing</i>	●B(?): percentage not different in mice exposed to radiant catalytic ionization for sanitization and in controls(Niemiec et al. 2022)
Neutrophils	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(Hep): dose- and time related decrease after whole body irradiation(Shimura et al. 2020)
Neutrophils	Mouse	<i>Blood</i>	<i>Other biological</i>	●F: not different when in enriched or standard environment in BALB/c & C57BL/6 (Clipperton-Allen et al. 2015)
Neutrophils	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in uncultured litters than in litters culled to 4 or 6(Paigen et al. 2014)
Neutrophils	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
Neutrophils	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): F; isoflurane anesthesia; not different after 3mth exposure to various housing enrichments except higher when given shower hooks(Peveler et al. 2019)

Neutrophils	Mouse	Blood	Other technical	●B(EDTA): M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(Voros et al. 2021)
Neutrophils	Mouse	Blood	Other technical	●B(?): M/F; isoflurane anesthesia; healthy animals; not different 4 & 24h after 16% blood loss(Marx et al. 2015)
Neutrophils	Mouse	Blood	Sampling	●B(EDTA): twice higher in tail clipping than saphenous blood specimens(Abatan et al. 2008)
Neutrophils	Mouse	Blood	Sampling	●B(EDTA): ~250 μ L weekly; retrobulbar isoflurane vs /facial veine without anesthesia; not different & stable for 5wks, decreased on 6 th wk(Frohlich et al. 2018)
Neutrophils	Mouse	Blood	Sampling	●B(?): not different from controls after daily abdominal puncture or 0.5 mL saline IP in females(Davis et al. 2014)
Neutrophils	Mouse	Blood	Sampling	●B(Hep): methoxyflurane anesthesia; %ge higher from cardiac puncture than in saphenous and tail veins specimens in males not females(Doeing et al. 2003)
Neutrophils	Mouse	Blood	Sampling	●B(EDTA): higher from tail than eye than heart(Nemzek et al. 2001)
Neutrophils	Mouse	Blood	Stability	●B(EDTA): stable up to 3d at 4°C(Ameri et al. 2011)
Neutrophils	Mouse	Blood	Stability	●B(EDTA) vs B(Hep): stable up to 72h in EDTA at 4°C, decreased in Hep at 24 & 48h(Wiedmeyer et al. 2007)
Neutrophils	Mouse	Blood	Stability	●B(EDTA): not different up to 2d at 4°C and 1d at room temp.(Layssol-Lamour et al. 2019)
Neutrophils	Mouse	Blood	Stress	●B(EDTA): increased after repeated social defeat stress (male intruder)(Ishikawa et al. 2021)
Neutrophils	Mouse	Blood	Stress	●B(EDTA):males; time-related increase by repetitive social stress (aggressive male intruder) for 2, 4 and 6d (Engler et al. 2004)
Neutrophils	Mouse	Blood	Stress	●B(EDTA):not different after 7d daily mild random stress; Neutrophils/Lymphocytes ratio increased(Hickman 2017)
Neutrophils	Mouse	Blood	Stress	●B(?): not different after 10 days of “chronic unpredictable stress”(McDonald et al. 2019)
Neutrophils	Mouse	Blood	Stress	●B(Hep): decreased after 1d or 25d isolation; increased after daily restraint for 25d(Bowers et al. 2008)
Neutrophils	Mouse	Blood	Time variability	●B(Hep): peak 6am shifted and decreased to 9am in Clock mutants(Oishi et al. 2006)
Oestradiol	Mouse	Blood	Stress	●P(Hep): 60% higher by daily ultra light stress from d1 to d15 of pregnancy in females; not different from controls 3d post-partum(Misdrahi et al. 2005)
Osmolality	Mouse	Blood	Drugs	●S: M; not different after 25, 50 and 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
PCT	Mouse	Blood	Stability	●B(EDTA): not different up to 2d at 4°C and room temp.(Layssol-Lamour et al. 2019)
PCV	Mouse	Blood	Anticoagulant	●B(EDTA): higher than B(Hep)(Moorhead et al. 2016)
PCV	Mouse	Blood	Drugs	●B(Hep): not different after feeding fenbendazole supplemented diet for up to 9wks(Cray et al. 2008)
PCV	Mouse	Blood	Drugs	●B(Hep): dose-related decrease after 28d oral dosing wit fipronil(Abouelghar et al. 2020)
PCV	Mouse	Blood	Drugs	●B(EDTA): M; <15% increase after 25, 50, 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
PCV	Mouse	Blood	Housing	●B(?): not different in mice exposed to radiant catalytic ionization for sanitization and in controls(Niemiec et al. 2022)
PCV	Mouse	Blood	Other biological	●B(EDTA): slightly higher in uncultured litters than in litters culled to 4 or 6(Paigen et al. 2014)
PCV	Mouse	Blood	Other biological	●B(Hep): not different in enriched environment; increased inter-individual variability(Tsai et al. 2003)
PCV	Mouse	Blood	Other biological	●B(EDTA): lower in C3H/HeJ than in 129SV/EV & C57BL/6J strains(Mazzaccara et al. 2008)
PCV	Mouse	Blood	Other biological	●B(?): lower in C3H/HeN than in Jcl: ICR,BALB/cA, C57BL/6J & C3H/HeN strains(Ohkura et al. 2007)
PCV	Mouse	Blood	Other biological	●B(Hep): slightly higher in BALB/c than in in A/J , C57BL/6 strains; not different with enriched vs. standard housing(Tsai et al. 2002)
PCV	Mouse	Blood	Other biological	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
PCV	Mouse	Blood	Other technical	●B(EDTA): M/F: retroorbital sampling after fentanyl citrate sedation; not different after 6 weekly blood sampling of 15% BW in males and 20% BW in females(Raabe et al. 2011)
PCV	Mouse	Blood	Other technical	●B(?): M/F; isoflurane anesthesia; healthy animals; ~25% decrease 4 & 24h after 16% blood loss(Marx et al. 2015)
PCV	Mouse	Blood	Other technical	●B(EDTA): M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(Voros et al. 2021)
PCV	Mouse	Blood	Other technical	●B(EDTA): increased (not significantly) by up to 1/5 dilution of specimen(Moorhead et al. 2016)
PCV	Mouse	Blood	Sampling	●B(EDTA): higher from tail than eye than heart(Nemzek et al. 2001)
PCV	Mouse	Blood	Sampling	●B(Hep): lower in jugular vein than lateral tail vein specimen(Shirasaki et al. 2012)
PCV	Mouse	Blood	Sampling	●B(Hep): higher from tail than jugular vein(Shirasaki et al. 2012)

PCV	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): stable up to 3d at 4°C(Ameri et al. 2011)
PCV	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA) vs B(Hep): stable up to 72h in EDTA at 4°C, time-related increase in Hep(Wiedmeyer et al. 2007)
PCV	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): not different up to 2d at 4°C and 6h at room temp.(Layssol-Lamour et al. 2019)
PCV	Mouse	<i>Blood</i>	<i>Stress</i>	●B(?): increased by repeated cold-stress during 7d and by other stresses(Hata et al. 1988)
PCV	Mouse	<i>Blood</i>	<i>Stress</i>	●B(?): marginally decreased after 10 days of “chronic unpredictable stress”(McDonald et al. 2019)
PDW	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): not different up to 6h at room temp.; different from 6h at 4°C(Layssol-Lamour et al. 2019)
Phosphate	Mouse	<i>Blood</i>	<i>Food</i>	●P(Hep): variably changed with duration and time of initiation of fasting in males(Jensen et al. 2019)
Phosphate	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: lower in 129SV/EV than in C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)
Phosphate	Mouse	<i>Blood</i>	<i>Other technical</i>	●S: M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice, except higher in C57BL females(Voros et al. 2021)
Platelets	Mouse	<i>Blood</i>	<i>Anticoagulant</i>	●B(EDTA): higher than B(Hep)(Moorhead et al. 2016)
Platelets	Mouse	<i>Blood</i>	<i>Anticoagulant</i>	●B(EDTA): M/F; sedated; less platelet aggregates from jugular than facial vein; no effect of antiaggregation additives; platelet count lower in highly aggregated specimens(Layssol-Lamour et al. 2022)
Platelets	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(?): isoflurane anesthesia; retrororbital sampling; increased after cisplatin and doxorubicin; increased then decreased after busulfan(Rix et al. 2020)
Platelets	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(Hep): dose-related decrease after 28d oral dosing wit fipronil(Abouelghar et al. 2020)
Platelets	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(Hep): not different after feeding fenbendazole supplemented diet for up to 9wks(Cray et al. 2008)
Platelets	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(EDTA): M; 0.1 mL PEG400, SC; cardiac puncture 2d after injection; lower in isoflurane anesthetized than non anesthetized mice(Jacobsen et al. 2004)
Platelets	Mouse	<i>Blood</i>	<i>Drugs</i>	●B(EDTA): M; non significant variations after 25, 50 and 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
Platelets	Mouse	<i>Blood</i>	<i>Housing</i>	●B(?): not different in mice exposed to radiant catalytic ionization for sanitization and in controls(Niemiec et al. 2022)
Platelets	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(Hep): dose- and time related decrease after whole body irradiation(Shimura et al. 2020)
Platelets	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): higher in C57BL/6J than in 129SV/EV & C3H/HeJ strains(Mazzaccara et al. 2008)
Platelets	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): slightly lower in uncultured litters than in litters culled to 4 or 6(Paigen et al. 2014)
Platelets	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
Platelets	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): increased (not significantly) by up to 1/5 dilution of specimen(Moorhead et al. 2016)
Platelets	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(?): not different from controls after daily abdominal puncture or 0.5 mL saline IP in females(Davis et al. 2014)
Platelets	Mouse	<i>Blood</i>	<i>Sampling</i>	●B(EDTA): ~250 µL weekly; retrobulbar isoflurane vs /facial veine without anesthesia; not different & stable for 6 wks(Frohlich et al. 2018)
Platelets	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA) vs B(Hep): stable for 30 min in EDTA and Hep at 4°C; then mmoe intensely decreased in Hep than EDTA(Wiedmeyer et al. 2007)
Platelets	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): stable up to 3d at 4°C(Ameri et al. 2011)
Platelets	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): not different up to 2d at 4°C and room temp.(Layssol-Lamour et al. 2019)
Platelets	Mouse	<i>Blood</i>	<i>Stress</i>	●B(?): decreased by repeated cold-stress during 7d(Hata et al. 1988)
Potassium	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: M; not different after 25, 50 and 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
Potassium	Mouse	<i>Blood</i>	<i>Food</i>	●P(Hep): ~not different according to duration and time of initiation of fasting in males(Jensen et al. 2019)
Potassium	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: lower in C57BL/6J than in 129SV/EV & C3H/HeJ strains(Mazzaccara et al. 2008)
Potassium	Mouse	<i>Blood</i>	<i>Other biological</i>	●P(Hep): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
Potassium	Mouse	<i>Blood</i>	<i>Other technical</i>	●S: M/F; isoflurane anesthesia; healthy animals; not different 4h & 24h after 16% blood loss(Marx et al. 2015)
Progesterone	Mouse	<i>Feces</i>	<i>Housing</i>	●F: females; higher in group housed mice than in single & paired separated mice for 8wks(Hohlbaum et al. 2022)
Progesterone	Mouse	<i>Hair</i>	<i>Housing</i>	●H: females; higher in separated pair housed mice than in single & group housed mice for 8wks(Hohlbaum et al. 2022)
Proteins (total)	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: dose-related increase after 28d oral dosing wit fipronil(Abouelghar et al. 2020)
Proteins (total)	Mouse	<i>Blood</i>	<i>Food</i>	●P(Hep): variably with duration and time of initiation of fasting in males(Jensen et al. 2019)
Proteins (total)	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)

Proteins (total)	Mouse	Blood	Other biological	●P(Hep): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
Proteins (total)	Mouse	Blood	Other biological	●P(Hep): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
Proteins (total)	Mouse	Blood	Other technical	●S: M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice, except higher in BALB females(Voros et al. 2021)
Proteins (total)	Mouse	Blood	Other technical	●S: M/F; isoflurane anesthesia; healthy animals; not different 4h & 24h after 16% blood loss(Marx et al. 2015)
Proteins (total)	Mouse	Blood	Sampling	●S(gel): retroorbital with isoflurane vs submandibular without anesthesia; higher in submandibular specimens of 16 & 22wk-old mice(Fernandez et al. 2010)
Proteins (total)	Mouse	Blood	Sampling	●P(Hep): ~250 µL weekly; retrobulbar isoflurane vs /facial veine without anesthesia; not different after 6 wks(Frohlich et al. 2018)
Proteins (total)	Mouse	Saliva	Food	●Saliva: ketamine anesthesia + IP Pilocarpine; lower after 12 wks voluntary exercise (wheel) in food restricted than non food restricted mice or in non exercised controls(Yoshino et al. 2009)
Proteins (total)	Mouse	Urine	Food	●U: dose-related increase of Prot/Creat ratio with percentage of sucrose in water(Kovalcikova et al. 2019)
RBC	Mouse	Blood	Anticoagulant	●B(EDTA) & B(Hep): not different(Moorhead et al. 2016)
RBC	Mouse	Blood	Anticoagulant	●B(EDTA): M/F; sedated; not different in highly aggregated specimens(Layssol-Lamour et al. 2022)
RBC	Mouse	Blood	Drugs	●B(?): isoflurane anesthesia; retrorbital sampling; decreased after busulfan and doxorubicin, not cisplatin(Rix et al. 2020)
RBC	Mouse	Blood	Drugs	●B(Hep): dose-related decrease after 28d oral dosing wit fipronil(Abouelghar et al. 2020)
RBC	Mouse	Blood	Drugs	●B(Hep): not different after feeding fenbendazole supplemented diet for up to 9wks(Cray et al. 2008)
RBC	Mouse	Blood	Drugs	●B(EDTA): M; 0.1 mL PEG400, SC; cardiac puncture 2d after injection; not different in isoflurane anesthetized & non anesthetized mice(Jacobsen et al. 2004)
RBC	Mouse	Blood	Drugs	●B(EDTA): M; <15% increase after 25, 50, 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
RBC	Mouse	Blood	Housing	●B(?): not different in mice exposed to radiant catalytic ionization for sanitization and in controls(Niemiec et al. 2022)
RBC	Mouse	Blood	Other biological	●B(Hep): not different in A/J , BALB/c, C57BL/6 strains; not different with enriched vs. standard housing; inter-individual variability hugher in enriched housing (Tsai et al. 2002, Tsai et al. 2003)
RBC	Mouse	Blood	Other biological	●B(Hep): 30% decrease 6d after 3Gy whole body X-ray irradiation(Sun et al. 2018)
RBC	Mouse	Blood	Other biological	●B(EDTA): not different in uncultured litters than in litters culled to 4 or 6(Paigen et al. 2014)
RBC	Mouse	Blood	Other biological	●B(Hep): dose- and time-related decrease after whole body irradiation(Shimura et al. 2020)
RBC	Mouse	Blood	Other biological	●B(EDTA): lower in C3H/HeJ than in 129SV/EV & C57BL/6J strains(Mazzaccara et al. 2008)
RBC	Mouse	Blood	Other biological	●B(?): lower in C3H/HeN than in Jcl: ICR,BALB/cA, C57BL/6J & C3H/HeN strains(Ohkura et al. 2007)
RBC	Mouse	Blood	Other biological	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
RBC	Mouse	Blood	Other technical	●B(EDTA): decreased (not significantly) by up to 1/5 dilution of specimen(Moorhead et al. 2016)
RBC	Mouse	Blood	Other technical	●B(EDTA): M/F: retroorbital sampling after fentanyl citrate sedation; not different after 6 weekly blood sampling of 15% BW in males and 20% BW in females(Raabe et al. 2011)
RBC	Mouse	Blood	Other technical	●B(EDTA): M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(Voros et al. 2021)
RBC	Mouse	Blood	Sampling	●B(?): not different from controls after daily abdominal puncture or 0.5 mL saline IP in females(Davis et al. 2014)
RBC	Mouse	Blood	Sampling	●B(EDTA): higher from tail than eye than heart(Nemzek et al. 2001)
RBC	Mouse	Blood	Sampling	●B(EDTA): ~250 µL weekly; retrobulbar isoflurane vs /facial veine without anesthesia; not different & mildly decreased from 2 nd then stable up to 6 th wk(Frohlich et al. 2018)
RBC	Mouse	Blood	Stability	●B(EDTA): stable up to 3d at 4°C(Ameri et al. 2011)
RBC	Mouse	Blood	Stability	●B(EDTA) vs B(Hep): stable up to 72h in EDTA at 4°C, time-related increase in Hep(Wiedmeyer et al. 2007)
RBC	Mouse	Blood	Stability	●B(EDTA): not different up to 2d at 4°C and room temp.(Layssol-Lamour et al. 2019)
RBC	Mouse	Blood	Stress	●B(?): increased by repeated cold-stress during 7d and by other stresses(Hata et al. 1988)
RBC	Mouse	Blood	Stress	●B(?): marginally decreased after 10 days of “chronic unpredictable stress”(McDonald et al. 2019)
RBC	Mouse	Blood	Stress	●B(Hep): not different in enriched environment; increased inter-individual variability(Tsai et al. 2003)
RBC	Mouse	Blood	Time variability	●B(Hep): peak at midday shifted and decreased to 6am in Clock mutants(Oishi et al. 2006)

RDW	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): slightly lower in uncultured litters than in litters culled to 4 or 6(Paigen et al. 2014)
RDW	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
RDW	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): increased from 1 st d at 4°C(Ameri et al. 2011)
RDW	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): not different up to 2d at 4°C and 6h at room temp.(Layssol-Lamour et al. 2019)
Reticulocytes	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in uncultured litters than in litters culled to 4 or 6(Paigen et al. 2014)
Reticulocytes	Mouse	<i>Blood</i>	<i>Other biological</i>	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(Lofgren et al. 2008)
Reticulocytes	Mouse	<i>Blood</i>	<i>Other technical</i>	●B(EDTA): M/F: retroorbital sampling after fentanyl citrate sedation; intense increase from first of 6 weekly blood sampling of 15% and 20%(Raabe et al. 2011)
Reticulocytes	Mouse	<i>Blood</i>	<i>Stability</i>	●B(EDTA): stable up to 3d at 4°C(Ameri et al. 2011)
SOD	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: dose-related decrease after 28d oral dosing with fipronil(Abouelghar et al. 2020)
SOD	Mouse	<i>Blood</i>	<i>Food</i>	●S: not different in mice fed a mycotoxin contaminated diet(Hou et al. 2013)
Sodium	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: M; not different after 25, 50 and 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
Sodium	Mouse	<i>Blood</i>	<i>Food</i>	●P(Hep): ~not different according to duration and time of initiation of fasting in males(Jensen et al. 2019)
Sodium	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)
Sodium	Mouse	<i>Blood</i>	<i>Other technical</i>	●S: M/F; isoflurane anesthesia; healthy animals; not different 4h & 24h after 16% blood loss(Marx et al. 2015)
T3	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: decreased after 45d exposure to high dose tributyltin(Sharan et al. 2014)
T4	Mouse	<i>Blood</i>	<i>Stress</i>	●B(Hep): not different in enriched environment(Tsai et al. 2003)
T4	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: dose-related decrease after 45d exposure to tributyltin(Sharan et al. 2014)
Testosterone	Mouse	<i>Blood</i>	<i>Other biological</i>	●P(Hep): males; ~5 times higher in dominants than subordinates(Machida et al. 1981)
Testosterone	Mouse	<i>Blood</i>	<i>Stress</i>	●P(Hep): decapitation; immobilization; decreased from 30min ; min (~ :2) at 180 min and stable till 360min(Dong et al. 2004)
Testosterone	Mouse	<i>Feces</i>	<i>Time variability</i>	●H: concentration maximum in males ~9pm & lowest ~1am; not different in females(Auer et al. 2020)
Testosterone	Mouse	<i>Hair</i>	<i>Housing</i>	●H: males; not different in mice bred in large groups or in pairs(Elmi et al. 2020)
Thromboelastogram	Mouse	<i>Blood</i>	<i>Stability</i>	●P(Cit): same results in retrobulbar (anesthetized) and submandibular (unanesthetized) specimens(Holmberg et al. 2011)
Triglycerides	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: M; dose-related increase after 25, 50 and 100 mg/L corticosterone in drinking water for 25d(Cassano et al. 2012)
Triglycerides	Mouse	<i>Blood</i>	<i>Food</i>	●S: ~x2, 2 to 3h after liquid gavage 2g/kg lipid diet(Panzoldo et al. 2011)
Triglycerides	Mouse	<i>Blood</i>	<i>Food</i>	●P(Hep): variably changed with duration and time of initiation of fasting in males(Jensen et al. 2019)
Triglycerides	Mouse	<i>Blood</i>	<i>Food</i>	●S: higher in fed than fasting(Parks et al. 2005)
Triglycerides	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: not different from controls in obese Kunming, ICR, C57BL/6 and BALB/c after feeding a high fat diet(Li et al. 2020)
Triglycerides	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: lower in 129SV/EV & C57BL/6J than C3H/HeJ strains(Mazzaccara et al. 2008)
Triglycerides	Mouse	<i>Blood</i>	<i>Other biological</i>	●P(Hep): lower in female CYP2C18&19 humanized mice model than wild-type; not different in males(Lofgren et al. 2008)
Triglycerides	Mouse	<i>Blood</i>	<i>Sampling</i>	●S(+Sep): ~25% higher by tail clipping in unanesthetized than by cardiac puncture in xylazine/ketamine anesthetized(Chan et al. 2012)
Triglycerides	Mouse	<i>Blood</i>	<i>Sampling</i>	●S(gel): retroorbital with isoflurane vs submandibular without anesthesia; higher in submandibular specimens of 16 & 22wk-old mice(Fernandez et al. 2010)
Triglycerides	Mouse	<i>Blood</i>	<i>Stress</i>	●P(?): 8wks of unpredictable mild stresses; not significantly increased(Stanley et al. 2014)
Triglycerides	Mouse	<i>Blood</i>	<i>Stress</i>	●S: decapitation; not different after 90min & 24h acute restraint stress and after chronic (3d) repeated restraint; x1.4 increase after unpredictable repeated stress(Kuti et al. 2022)
TSH	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: dose-related increase after 45d exposure to tributyltin(Sharan et al. 2014)
Urate	Mouse	<i>Blood</i>	<i>Drugs</i>	●S: dose-related increase after 28d oral dosing with fipronil(Abouelghar et al. 2020)
Urate	Mouse	<i>Blood</i>	<i>Other biological</i>	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(Mazzaccara et al. 2008)
Urate	Mouse	<i>Blood</i>	<i>Other technical</i>	●S: M/F; pentobarbital anesthesia; not different after 4wk housing on wheat straw, rice straw or wood shavings(Mohamed et al. 2018)

Urea	Mouse	Blood	Drugs	●S: isoflurane anesthesia; retroorbital sampling; increased after cisplatin not after busulfan or doxorubicin(<i>Rix et al. 2020</i>)
Urea	Mouse	Blood	Drugs	●S: not different 24h after anesthesia with Ketamine–xylazine, Pentobarbital, Tiletamine–zolazepam, Isoflurane or Sevoflurane (<i>Gibbs et al. 2019</i>)
Urea	Mouse	Blood	Drugs	●S: dose-related increase after 28d oral dosing wit fipronil(<i>Abouelghar et al. 2020</i>)
Urea	Mouse	Blood	Food	●P(Hep): variably changed with duration and time of initiation of fasting in males(<i>Jensen et al. 2019</i>)
Urea	Mouse	Blood	Other biological	●P(Hep): not different in CYP2C18&19 humanized mice model and wild-type(<i>Lofgren et al. 2008</i>)
Urea	Mouse	Blood	Other biological	●S: not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(<i>Mazzaccara et al. 2008</i>)
Urea	Mouse	Blood	Other technical	●S: M/F; pentobarbital anesthesia; not different after 4wk housing on wheat straw, rice straw or wood shavings(<i>Mohamed et al. 2018</i>)
Urea	Mouse	Blood	Other technical	●S: M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(<i>Voros et al. 2021</i>)
Urea	Mouse	Blood	Other technical	●S: M/F; isoflurane anesthesia; healthy animals; not different 4h & 24h after 16% blood loss(<i>Marx et al. 2015</i>)
Urea	Mouse	Blood	Sampling	●S(gel): retroorbital with isoflurane vs submandibular without anesthesia; not different in 8, 16 & 22wk-old mice(<i>Fernandez et al. 2010</i>)
Urea	Mouse	Blood	Sampling	●P(Hep): ~250 µL weekly; retrobulbar isoflurane vs /facial veine without anesthesia; not different after 6 wks(<i>Frohlich et al. 2018</i>)
WBC	Mouse	Blood	Anticoagulant	●B(EDTA): M/F; sedated; not different in highly aggregated specimens(<i>Layssol-Lamour et al. 2022</i>)
WBC	Mouse	Blood	Anticoagulant	●B(EDTA): higher than B(Hep)(<i>Moorhead et al. 2016</i>)
WBC	Mouse	Blood	Drugs	●B(?): isoflurane anesthesia; retrorbital sampling; decreased after cisplatin and busulfan, not doxorubicin(<i>Rix et al. 2020</i>)
WBC	Mouse	Blood	Drugs	●B(Hep): total and differential counts not different after feeding fenbendazole supplemented diet for up to 9wks(<i>Cray et al. 2008</i>)
WBC	Mouse	Blood	Drugs	●B(EDTA): M; 0.1 mL PEG400, SC; cardiac puncture 2d after injection; 15% lower in isoflurane anesthetized than non anesthetized mice(<i>Jacobsen et al. 2004</i>)
WBC	Mouse	Blood	Drugs	●B(EDTA): M; ~50% decrease after 50, 100 mg/L corticosterone in drinking water for 25d(<i>Cassano et al. 2012</i>)
WBC	Mouse	Blood	Drugs	●B(Hep): dose-related decrease after 28d oral dosing wit fipronil(<i>Abouelghar et al. 2020</i>)
WBC	Mouse	Blood	Food	●B(EDTA): time related increase in mice fed a high-fat diet(<i>Trottier et al. 2012</i>)
WBC	Mouse	Blood	Housing	●B(?): not different in mice exposed to radiant catalytic ionization for sanitization and in controls(<i>Niemiec et al. 2022</i>)
WBC	Mouse	Blood	Other biological	●B(Hep): decreased after whole body X-ray irradiation(<i>Sun et al. 2018</i>)
WBC	Mouse	Blood	Other biological	●B(EDTA): not different in uncultured litters than in litters culled to 4 or 6(<i>Paigen et al. 2014</i>)
WBC	Mouse	Blood	Other biological	●B(Hep): not different in enriched environment; increased inter-individual variability(<i>Tsai et al. 2003</i>)
WBC	Mouse	Blood	Other biological	●B(Hep): dose- and time related decrease after whole body irradiation(<i>Shimura et al. 2020</i>)
WBC	Mouse	Blood	Other biological	●B(EDTA): not different in 129SV/EV, C57BL/6J & C3H/HeJ strains(<i>Mazzaccara et al. 2008</i>)
WBC	Mouse	Blood	Other biological	●B(EDTA): not different in CYP2C18&19 humanized mice model and wild-type(<i>Lofgren et al. 2008</i>)
WBC	Mouse	Blood	Other technical	●B(EDTA): M/F; not different when lighting for 36d by blue-enriched LED or cool white fluorescent light in C3H/HeNcrI, C57BL/6NcrI and BALB/cAnNcrI mice(<i>Voros et al. 2021</i>)
WBC	Mouse	Blood	Other technical	●B(EDTA): F; isoflurane anesthesia; not different after 3mth exposure to various housing enrichments(<i>Peveler et al. 2019</i>)
WBC	Mouse	Blood	Other technical	●B(?): M/F; isoflurane anesthesia; healthy animals; ~40% decrease 4h, recovered at 24h after 16% blood loss(<i>Marx et al. 2015</i>)
WBC	Mouse	Blood	Other technical	●B(Hep): lower in A/J than BALB/c, C57BL/6 strains; not different with enriched vs. standard housing; inter-individual variability hugher in enriched housing(<i>Tsai et al. 2002, Tsai et al. 2003</i>)
WBC	Mouse	Blood	Other technical	●B(EDTA): increased (not significantly) by up to 1/5 dilution of specimen(<i>Moorhead et al. 2016</i>)
WBC	Mouse	Blood	Sampling	●B(EDTA): 35% higher in tail clipping than saphenous blood specimens(<i>Abatan et al. 2008</i>)
WBC	Mouse	Blood	Sampling	●B(Hep): methoxyflurane anesthesia; lower from cardiac puncture than in saphenous, tail and foot veins specimens(<i>Doeing et al. 2003</i>)
WBC	Mouse	Blood	Sampling	●B(EDTA): ~250 µL weekly; retrobulbar isoflurane vs /facial veine without anesthesia; not different & stable for 5wks, decreased on 6 th wk(<i>Frohlich et al. 2018</i>)
WBC	Mouse	Blood	Sampling	●B(?): not different from controls after daily abdominal puncture or 0.5 mL saline IP in females(<i>Davis et al. 2014</i>)
WBC	Mouse	Blood	Sampling	●B(EDTA): higher from tail than eye than heart(<i>Nemzek et al. 2001</i>)
WBC	Mouse	Blood	Stability	●B(EDTA): stable up to 3d at 4°C(<i>Ameri et al. 2011</i>)

WBC	Mouse	Blood	Stability	●B(EDTA) vs B(Hep): stable up to 72h in EDTA at 4°C, decreased in Hep from 24h(Wiedmeyer et al. 2007)
WBC	Mouse	Blood	Stability	●B(EDTA): not different up to 2d at 4°C and room temp.(Layssol-Lamour et al. 2019)
WBC	Mouse	Blood	Stress	●B(Hep): not different after 1d or 25d restraint, forced swimming, low temp., handling or isolation(Bowers et al. 2008)
WBC	Mouse	Blood	Stress	●B(EDTA):not different after 7d daily mild random stress(Hickman 2017)
WBC	Mouse	Blood	Stress	●B(EDTA):males; unchanged for 4d of repetitive social stress (aggressive male intruder): 10% increase after 6d(Engler et al. 2004)
WBC	Mouse	Blood	Stress	●B(?): unchanged by repeated cold-stress during 7d; decreased by different other stresses(Hata et al. 1988)
WBC	Mouse	Blood	Time variability	●B(Hep): peak 6am shiftedand decreased to 9am in Clock mutants(Oishi et al. 2006)

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