**Material and methods**

**Introduction**

**Results**

**Conclusions**

**Equine Semen Exenders**

- INRA96\(^{TM}\):
  - Milk proteins
  - Lactose & glucose (up)
  - No lactate

**Human Semen Exenders**

- Allgradwash\(^{TM}\):
  - No proteins
  - Glucose (down) no lactose
  - Lactate

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**Preservation of motility at 40x10\(^6\)spz/ml**

- Total motility in INRA 96
- Progression motility in INRA 96
- Total motility in Human Medium
- Progression motility in Human medium

**Preservation of motility at 100x10\(^6\)spz/ml**

- Total motility in INRA 96
- Progression motility in INRA 96
- Total motility in Human Medium
- Progression motility in Human medium

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**Preservation of motility at 40x10\(^6\)spz/ml**

- Lactate after 24 hours
  - Up in Allgradwash\(^{TM}\) when compared to INRA96

- Median glucose concentration in INRA 96:
  - 17.86mmol in native vs 25.57mmol after 24h of semen preservation

**Preservation of motility at 100x10\(^6\)spz/ml**

- Glucose after 24 hours
  - Down in Allgradwash\(^{TM}\) when compared to INRA96

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**Aims of the study:** to compare equine semen motility, glucose use and lactate production in:

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**Glucose use and lactate production by equine fresh semen in human and equine extenders**

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\(^{4}\)LINALUX-MLS, Centre Européen du Cheval, Vielsalm, Belgium

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**Material and methods**

**Raw semen analysis:**

- Concentration
- Motility (CASA)

**20 ejaculates:**

- 5 stallions
- 4 collections

**Storage:**

- 24 hours, 20°C, tubes closed

**Centrifugation 1000xg 20 min**

**1ml supernatant:**

- ¼ semen ¾ extender

- Storage: 24 hours, 20°C, tubes closed
- Motility (CASA): 1, 2, 4, 8, 24 h
- Nuclear Magnetic Resonance: glucose and lactate concentrations: 24 h

**Statistics:** kruskall-wallis test for median differences

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**Aims of the study:** to compare equine semen motility, glucose use and lactate production in:

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**Conclusions**

- Human extender doesn’t support equine semen storage: progressive motility is rapidly lower
  - Effect on progressive motility rather than on total: Non-progressive motility previously associated with glycolysis

- Glucose use and lactate production negligible:
  - No differences between 40 & 100x10\(^6\)spz/ml

- Glucose increased in INRA96 after 24 hours of storage:
  - Extracellular cleavage of complexe carbohydrates?