

# Next generation **AFL<sup>®</sup> SYSTEM**

The clinical solution for arrested labor



**AFL<sup>®</sup> monitoring provides information that may help to reduce:**





## Arrested labor

About 20 % of all delivering women suffer from arrested labor – a situation that often results in abnormally long deliveries.

That means a heavy strain affecting both the mother and the fetus, as well as the delivery wards.

If labor is arrested, it can lead to complications such as postpartum hemorrhage or fetal asphyxia, and may result in an emergency cesarean section.

Amniotic Fluid Lactate level (AFL®) monitoring is a tool to support clinical decision-making in this challenging situation. A high level of lactate in amniotic fluid indicates that the uterus is exhausted. The AFL® test is a non-invasive test that helps obstetricians and midwives to gain a better understanding of how to handle the situation and how to proceed.

## Clinical Situation

When muscles work hard, lactate is produced. A high level of lactate indicates muscle hypoxia.

Lactate concentration in amniotic fluid indicates lactate level in the uterus. The AFL® system is used to monitor the lactate concentration in amniotic fluid, which indicates the contraction capability of the uterus muscle. Contraction capability, combined with other information available, facilitates decision-making on how to progress with the labor.

When labor is arrested, the standard treatment is oxytocin infusion. It is well known that oxytocin can lead to under- or over stimulation of the uterus, and can have an adverse effect on both mother and fetus.

The AFL® level provides unique information on the status of the uterus, which can support decisions to individualize treatment to potentially avoid complications and unnecessarily operative deliveries.

## Easy to learn – Easy to use

0.25-0.5 mL  
of pouring amniotic  
fluid is needed for  
measurement

A single use AFL®  
sensor is put into  
the AFL® unit, and  
the amniotic fluid is  
added using a syringe



A non-invasive tool

Measurement starts  
automatically

The result is  
displayed within  
20 seconds

## Clinical references

Experimental studies demonstrate<sup>1</sup> that the lactate level in the amniotic fluid correlates to the lactate level in the uterus muscle.

In clinical studies of more than 5 000 women diagnosed with arrested labor, the patient group with normal AFL® levels in amniotic fluid (<10.1 mmol/l) had a normal delivery in 80 % of the cases.<sup>2,3,4,5,6</sup>

Of those with a **high** AFL® level (>12.0 mmol/l), as much as 85% were instrumental deliveries or cesarean section deliveries.<sup>2,3,4,5,6</sup>

A meta-analysis conducted by the University of Linköping in Sweden, indicates that cesarean and other instrumental deliveries may decrease when using the AFL® method. It was found that the number of emergency cesarean sections decreased by 30 %, and instrumental deliveries decreased by approximately 12 %, when using the AFL® method.<sup>7</sup>

## AFL®-monitoring

The ObsteCare AFL® Monitoring System **is built on patented technology** and tailored for the measurement of lactate in amniotic fluid during active labor.

The AFL® method should only be used in conjunction with other clinical methods employed to monitor the progression of birth, and for monitoring the fetus.

The intended patient population is singleton pregnant women in active labor with ruptured membranes.

References 1-7 are on the last page.



## AFL® in practical care

### Threshold levels

These cut-off levels were defined on the basis of clinical studies.



< 10.1 mmol/l	10.1-12.0 mmol/l	12.0 mmol/l >
<b>Normal levels</b> Levels of AFL® are normal, which indicates the uterus does not need to rest, and there is a low risk of complications. Follow your hospital protocol to achieve good labor progress.	<b>Intermediary levels of AFL®</b> Monitor changes in AFL® level closely. AFL® level indicates that the uterus may need to rest and therefore, is probably less receptive to treatment. AFL® measurement should be repeated at the next examination to check whether the AFL® level has increased further.  Exercise extreme caution with uterine stimulation.	<b>Abnormal levels of AFL®</b> AFL® level indicates that the uterus needs time to recover, and is therefore less receptive to treatment.



### References

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3. Lactate in Amniotic Fluid: Predictor of Labor Outcome in Oxytocin-Augmented Primiparas' Deliveries Wiberg-Itzel E, Pembe A, Järnbert-Petterson H, Norman M, Wihlbäck A-C, Hoesti I, Todesco Bernasconi M, Azria E, Åkerud H, Darj E. PLOS ONE, online 26 October 2016, doi: 10.1371/journal.pone.0161546  
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6. Association between adverse neonatal outcome and lactate concentration in amniotic fluid Wiberg-Itzel E, Åkerud H, Andolf E, Hellström-Westas L, Winblad B, Wennerholm UB. Obstet Gynecol. 2011 Jul;118(1):135-42.  
<https://www.ncbi.nlm.nih.gov/pubmed/21691171>
7. <https://liu.se/forskning/centrum-for-utvardering-av-medicinsk-teknologi/cmt-obstecares-afl-metod->

### Ordering information:

**AFL® Unit, article number 115-0001**  
**AFL® Sensor, article number DSAF061**

Place your order at:  
[order@obstecare.com](mailto:order@obstecare.com)

ObsteCare AB is a provider of medical solutions with a global focus on improving delivery care for both the mother and the healthcare provider. This is done through the supply of reliable services and products, facilitating efficient care on maternity wards.