uid spot spreads instantaneously and the dynamics of the spot area become steady in approx. 20 seconds, whereas in knitted fabrics with the outer layer made of cotton yarns, the liquid spot spreads gradually, and the dynamics of the spot area become steady in approx. 1-3 minutes, subject to course and wale densities in the fabric.

- When the dynamics of the spot area become steady, the area of the liquid spot on the inner and outer surfaces of fabrics knitted from a cotton yarn and synthetic thread combination is greater than in the case of fabrics knitted from a man-made bamboo yarn and synthetic thread combination. The greater area of the liquid spot means this fabric will dry more rapidly.

- The fabrics knitted from cotton and, bamboo yarns (outer layer), as well as synthetic Coolmax threads (inner layer) came top, with the fastest water absorption. The fabrics knitted from a PP thread and cotton yarn combination (especially the ones with a higher loop density) showed the worst ability to absorb water.

- When the dynamics of the liquid spot area become steady, the area of the spot on both the inner and outer sides of plain plated weft knitted fabric is similar. Meanwhile, the spot area of weft knitted fabrics of combined structure with loops of synthetic threads and cotton yarns on the inner side is almost two times greater than on the outer side. Thus, the sensation of dryness is better when wearing a product made of weft knitted fabrics of plain plated pattern.

- When the dynamics of the liquid spot area become steady, the spot areas in the outer layer of all the weft knitted fabrics (for all corresponding raw materials) analysed are very similar, thus their drying conditions are similar as well.

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References

1. *Wu H.Y., Zhang W., Li J.; Study on Improving the Thermal-Wet Comfort of Clothing during Exercise with an Assembly of Fabrics. Fibres&Textiles in Eastern Europe, Vol. 15, No. 4 (75), 2009, pp. 46-51.*
2. *Umbach K. H.; Aspects of clothing physiology in the development of sportswear, Knitting Technique, Vol 15, No. 3, 1993, pp. 165-169.*
3. *Brazaitis M., Kamandulis S., Skurvydas A., Daniuseviciutė L.; The effect of two kinds of T-shirts on physiological and psychological thermal characteristics during exercise and recovery, Applied Ergonomics, Vol. 44, No. 2, 2010, pp. 619-624.*
4. *Ermulu N., Ozipek O.; Investigation of Regenerated Bamboo Fibre and Yarn Characteristics, Fibres & Textiles in Eastern Europe, Vol. 16, No. 4(69), 2008, pp. 43-47.*
5. *Gavin T. P.; Clothing and thermoregulation during exercise, Sports Med., Vol. 33(13), 2003, pp. 941-947.*
6. *Abramavičūtė J., Mikučionienė D., Čiukas R.; Static Water Absorption of Knits from Natural and Textured Yarns, Fibres&Textiles in Eastern Europe, Vol. 19, No. 3(86), 2011, pp. 60-63.*
7. *Petrulytė S., Baltakytė R.; Liquid Sorption and Transport in Woven Structures, Fibres & Textiles in Eastern Europe, Vol. 17, No. 2(73), 2009, pp. 39-45.*
8. *Das B., Das A., Kothari V. K., Fanguiero R., Araujo M.; Moisture transmission through textiles, Part I: processes involved in moisture transmission and the factors at play, AUTEX Research Journal, No. 2(7), 2007, pp. 100-110.*
9. *Das B., Das A., Kothari V. K., Fanguiero R., Araujo M.; Moisture transmission through textiles, Part II: evaluation methods and mathematical modelling, AUTEX Research Journal, No. 3(7), 2007, pp. 194-216.*
10. *Mikučionienė D., Laureckienė G.; The Influence of Drying Conditions on Dimensional Stability of Cotton Weft Knitted Fabrics, Materials Science (Medžiagotyra), Vol. 15, No.1, 2009, pp. 64-68.*
11. *Petrulytė S., Baltakytė R.; Static Water Absorption in Fabrics of Different Pile Height, Fibres & Textiles in Eastern Europe, Vol. 17, No. 3(74), 2009, pp. 60-65.*
12. *Baltakytė R., Petrulytė S.; Effect of fabric structure and finishing on dynamic absorption in terry fabrics with bleached/grey pile, Tekstil, No. 58(4), 2009, pp. 127-134.*
13. *Baltakytė R., Petrulytė S.; Analysis of Dynamic Water Absorption Phenomenon in Pile Fabrics, Tekstil, No. 57(5), 2008, pp. 211-217.*

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