



A METHOD FOR PRODUCING AN ORTHOTIC INSOLE WITH FINE-TUNED CONTOUR

5 FIELD OF INVENTION

The present invention relates to a method for producing an orthotic insole with fine-tuned contoured to correct any postural imbalance of a user. In more particular, the present invention relates to a method for producing an orthotic insole or shoe sole
10 which is capable of balancing up the distribution of plantar of a user, in order to achieve postural balance of the human body and thus restoring the health of the bony structure of the body based on biomechanics concept.

15 BACKGROUND OF THE INVENTION

The human foot is a strong mechanical structure containing 26 bones and 33 joints, surrounded by more than a hundred muscles, tendons and ligaments. The arches of the foot formed by the tarsal and metatarsal bones, are bow-like structures having good
20 flexibility and capable of bearing the pressure and load from body weight when a person walk, run or jump. However, the foot arches are sometimes not perfectly formed due to the congenital or acquired defects. Such defects will not only lead to the imbalance distribution of the plantar pressure of one's foot, but also affect one's gait, the shift of his body's centre of gravity to an incorrect location, and thus causing
25 the pressure imbalance of his foot, knee, pelvis as well as spine, that may gradually lead to a number of disorders. For example, one with pes planus (flatfeet) has collapsed arches in which the force biases medially causing the formation of inwards splayfoot. His tibia and pelvis will also rotate internally causing the formation of X-shaped legs, which leads to the lateral abrasion of knees. On the other hand, one with
30 pes cavus (high arch) has exaggerated high arches in which the force biases laterally



causing an outwards splayfoot. The tibia and pelvis will rotate externally causing the formation of O-shaped legs. O-shaped legs will then lead to the medial abrasion of knees.

5 There are numerous types of orthotic insoles or arch correctors available in the industry. Some of the orthotic insoles are capable of correcting the mechanics of the foot by correcting the plantar pressure of the sole, thus correcting the abnormal internal and external rotation of flatfeet and high arch. However, as the foot is composed of many bones and joints, its muscles, ligaments and joints will grow
10 looser with ages and lead to various disorders. Apart from the previously formed abrasion sites, additional problems may also occur owing to the weight oppression of the human body. It is difficult to restore the postural balance of the body spine by merely using the specifications of the typical arch correction method, as the orthotic insole provides a standard specification but each human has different feet. Therefore,
15 the user of the orthotic insole may face new imbalances and new points of discomfort after wearing the orthotic insole.

A body biomechanics adjustment method is disclosed in U.S. Patent No. 6293916. This invention relates to a procedure for self-treating the bony architectural alignment
20 of human feet. The methodology provides a panel with a series of pads thereon to permit adjustment of the bony architecture of a person's feet simply by standing in sequence on the various pads. The pads are sized and employed to adjust a succession of regions of the arches, thereby to assist in restoring and maintaining the natural architecture of the foot. The pads are preferably supported by foam washers enabling
25 the user to add or remove washers to increase or decrease the height of the pads to accommodate a variety of foot types and intensities of desired stimulation. However, this invention applies the technology of body biomechanics to correct the alignment of only the human feet and not other parts of the body. It is not able to overcome the various disorders as set forth in the preceding description.

European Patent No. 1419750 discloses an improved method of producing insoles that are used to correct foot deformities and the product thus obtained. This invention comprises the steps of producing an orthotic pattern using a paper insole comprising the patient's footprint, preparing the orthotic insole by obtaining the insole once again
5 on another sheet of paper and copying the insole on a thermo-mouldable plastic resin sheet, preparing the patient's feet to receive the selected thermo-mouldable resin sheeting, fixing the thermo-mouldable resin which has been pre-softened in a kiln, placing a paper film between the sock and the softened resin, covering all the elements with a bag and sending the moulded insole to an orthopaedic workshop for
10 further processing. This invention aims to correct the alterations, affections and deformities of the feet by a tailored orthotic insole but is not capable of restoring the postural balance of the body spine or deformities of other parts of the body.

Another U.S. Patent No. 5341819 relates to a method for the selection of an insole
15 and/or of a shoe that adjusts the posture of the foot and for determination of the biomechanical mode of operation of the foot. This determination of biomechanical mode of operation of the foot is carried out by placing the foot on a symmetry axis of a measurement base, and the load thus applied by the measurement base to a rigid support based in relation to the symmetry axis of the measurement base is measured.
20 The measurement of the load is carried out preferably in two stages so that first the load is measured when the person stands on the measurement bases with straight legs, and thereafter the load is measured when the knees have been bent substantially 45 from the straight posture. There is, however, no method disclosed on the correction of plantar pressure of sole to further correct the disorders caused by foot deformities.

25 There is an adjustable orthotic insole and a method of application the same disclosed in U.S. Patent No. 2007294922. This insole has a shell and a sole lifter that is to correct malalignment of lower extremities and other functions such as cushioning, massage and others. This method involves a user with a right lower extremity and a
30 lift lower extremity standing on an orthotic insole with a forefoot area and a rear area.

The sole lifter being placed underneath either the right or the left forefoot area, position and thickness of the sole lifter being adjusted incessantly until malalignment of lower extremities reformed to demonstrate optimal alignment symmetrically. This invention merely aims to correct the malalignment by the sole lifter but no specific
5 method is provided on how this orthotic insole can be adjusted.

There are also a few methods disclosed in the prior arts relating to the correction of foot deformities by an orthotic insole. Most of the patented technologies provide types of methods for correcting deformities of foot by the orthotic insole. However, none of
10 the patented technologies discloses a specific method for producing an orthotic insole which can be tailored with a desired contour to correct any postural imbalance of a user. It is also desirable for the present invention to provide a method for producing an insole or an arch corrector which can be fine-tuned to balance up the distribution of plantar pressure of a sole from time to time to treat different disorders that caused by different
15 deformities of feet or limbs.

SUMMARY OF INVENTION

20 The primary object of the present invention is to provide a method for producing an orthotic insole or arch corrector which is capable of balancing up the distribution of plantar pressure of a sole, particularly the plantar pressure of a shoe having an orthotic insole applied therein, to correct the body malalignment and to restore the structural balance of feet as well as other parts of the human body.

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Another object of the present invention is to provide a method for producing an orthotic insole which can be fine-tuned from time to time according to the condition of the bony structure of the user in order to treat different disorders that caused by different deformities of feet or limbs based on biomechanics concept.

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Still another object of the present invention is to provide a method for producing an orthotic insole in which the orthotic prescription can be fine-tuned intermittently to tailor the desired contour of the insole using various types of padding units.

- 5 Yet another object of the present invention is to provide a method for fine-tuning the contour of an orthotic insole according to the demand and necessity of a user's feet and body condition.

- Further object of the present invention is to provide a method for fine-tuning the
10 contour of an orthotic insole in order to achieve an optimum postural balance of the body alignment as well as an to promote health condition of the user's spine and bony structure.

- At least one of the preceding objects is met, in whole or in part, by the present
15 invention, in which one of the embodiments of the present invention describes a method for producing an orthotic insole comprising the steps of determining plantar pressure and foot alignment of a user by mapping the user's footprints; analyzing the size, shape and image intensity of the mapped footprints; determining a desired contour for the insole by comparing the analyzed data with a database; and attaching a
20 padding unit or units (102, 103, 104) onto a sole blank (101) according to the desired contour to correct any postural imbalance of the user.

- In one of the preferred embodiments of the present invention, the footprints are obtained while the user is positioned in a correct standing posture. Preferably, each of
25 the footprints is mapped by drawing an outer contour line along the footprint, followed by a first straight line passing through a point at the edge of heel line horizontally, and a second straight line perpendicular to the first straight line and extending vertically from the first straight line to pass through the centre of the index toe. In another preferred embodiment of the present invention, a third straight line is
30 drawn perpendicularly to the first straight line, passing through a point at the edge of

the base of the hallux and forming a deviation angle with the extending direction of the hallux for analyzing the phenomenon of hallux valgus.

Another preferred embodiment of the present invention discloses that the database
5 used for analysis includes the personal characteristics, daily activities as well as health history of the user.

The sole blank (101) to be fine-tuned is preferably the midsole. The padding unit or units (102, 103, 104) are preferably made of loops. This padding unit or units (102,
10 103, 104) are preferably detachable from the sole blank (101).

According to the preferred embodiment of the present invention, the size, thickness and position of the padding unit or units (102, 103, 104) on the sole blank (101) are tailored to provide the desired contour for the insole. Most preferably, the method
15 embodied herein further comprises a step of installing the insole into a shoe.

Yet another preferred embodiment of the present invention is a method for producing an orthotic insole which further comprises a step of fine-tuning the contour of the insole by exchanging or removing the padding unit or units (102, 103, 104) after a
20 pre-defined period of application of the insole.

Further embodiment of the present invention is an orthotic insole produced by a method according to any of the preceding embodiments. Preferably, a shoe installed with this orthotic insole is also embodied herein.

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One skilled in the art will readily appreciate that the present invention is well adapted to carry out the objects and obtain the ends and advantages mentioned, as well as those inherent therein. The embodiments described herein are not intended as limitations on the scope of the invention.

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BRIEF DESCRIPTION OF THE DRAWINGS

For the purpose of facilitating an understanding of the invention, there is illustrated in the accompanying drawing the preferred embodiments from an inspection of which when considered in connection with the following description, the invention, its construction and operation and many of its advantages would be readily understood and appreciated.

- 10 Figure 1 shows a sole blank (101), which is preferably the midsole, attached with padding units [102, 103, 104(a), 104(b) and 104(c)] to achieve the desired contour for the insole which is tailored according to the condition of the bony structure of the user as described in one of the preferred embodiments of the present invention.
- 15 Figure 2 is a foot map of a right foot as described in one of the preferred embodiments of the present invention, showing the formation of flatfeet.
- 20 Figure 3 is a foot map of a right foot as described in one of the preferred embodiments of the present invention, showing the formation of high arch.
- Figure 4 is a foot map of a left foot as described in one of the preferred
25 embodiments of the present invention, showing the formation of bunion with a deviation angle of x° .
- Figure 5 shows various shapes of padding units (102, 103, 104), which includes
 (a) hoof-shaped, (b) fan-shaped and (c) round-shaped padding units
30 (102, 103, 104), with different sizes, as described in one of the

preferred embodiments of the present invention.

Figure 6 is a foot map of a left foot as described in one of the preferred
embodiments of the present invention, indicating the accumulation of
5 plantar pressure at the back portion of the sole.

Figure 7 is a foot map of a left foot as described in one of the preferred
embodiments of the present invention, indicating the accumulation of
plantar pressure at the front or toe portion of the sole.
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DETAILED DESCRIPTION OF THE INVENTION

The present invention relates to a method for producing an orthotic insole with fine-
15 tuned contoured to correct any postural imbalance of a user. In more particular, the
present invention relates to a method for producing an orthotic insole which is capable
of balancing up the distribution of plantar of a user, in order to achieve postural
balance of the human body and thus restoring the health of the bony structure of the
body based on biomechanics concept.

20 Hereinafter, the invention shall be described according to the preferred embodiments
of the present invention and by referring to the accompanying description and
drawings. However, it is to be understood that limiting the description to the preferred
embodiments of the invention and to the drawings is merely to facilitate discussion of
25 the present invention and it is envisioned that those skilled in the art may devise
various modifications without departing from the scope of the appended claim.

The present invention discloses a method for producing an orthotic insole comprising
the steps of determining plantar pressure and foot alignment of a user by mapping the
30 user's footprints; analyzing the size, shape and image intensity of the mapped

footprints; determining a desired contour for the insole by comparing the analyzed data with a database; and attaching a padding unit or units (102, 103, 104) onto a sole blank (101) according to the desired contour to correct any postural imbalance of the user.

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The following terms used throughout the specification have the indicated meanings unless expressly indicated to have a different meaning. In the present invention, the “front portion” of foot refers to the toe portion of the foot; whereas the “back portion” refers to the heel portion of the foot. The “inner portion” of the foot refers to the portion neighboring to another foot; whereas the “outer portion” refers to the portion further away from another foot of the user.

In one of the preferred embodiments of the present invention, the method for producing an orthotic insole is initiated by obtaining a user’s footprints to provide a foot map. This process is guided by a certified foot analyst (CFA) or a trained personnel to ensure the foot map obtained reveals the plantar pressure and foot alignment of the user which can then be correlated to the condition of his bony structure. The sole blank (101) used in the present invention can be an insole, a midsole and an outsole. As shown in Figure 1 is a midsole of the sole blank (101) attached with various padding units (102, 103, 104) to achieve the desired contour for the insole in order to correct any postural imbalance of the user, as described in one of the preferred embodiments of the present invention. The sole blank (101) can be attached with various round-shaped units [104(a), 104(b), 104(c)] which are also known as fine-tuning padding units at different positions, as illustrated in Figure 1.

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Preferably, ink, particularly black ink, is applied to achieve the purpose of obtaining the user's footprints. Accordingly, an applicator such as paint roller is employed to apply the ink onto a rubbing plate, whereby the rubbing plate is then placed on a blank foot map paper in such a way that the ink-applied surface of the rubbing plate faces downwards. It is to be noted that the blank foot map paper shall be folded into

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left and right side wherein only the side which is to be printed is facing upwards for the footprint-obtaining process. For example, the user's right footprint can be obtained by stepping his left foot onto the non-ink area located at the left side, which is without the blank foot map paper or the rubbing plate, followed by stepping his right foot onto the rubbing plate. The user is required to stand still during this process.

The footprints can be obtained while the user is positioned in a correct standing posture. The user is required to stand with his eyes looking straight forward, hands dropping naturally and knees bending in a slight squat. This posture allow the reveal of the user's plantar pressure on the foot map. When the user's feet is removed from the foot map, the centre of gravity is moved to the left foot, and the right foot is removed from the foot map before the left foot. If there is any swaying or movement of the user's feet occurred during the footprint-obtaining process or any of the abovementioned steps has been conducted wrongly, the procedure set forth in the preceding description shall be repeated.

Likewise, the user's left footprint can be obtained in a similar manner by stepping his right foot onto the non-ink area located at the right side followed by stepping his left foot onto the rubbing plate. Attention is drawn to the height of the user during the slight squat, which has to be at the same level for both footprint-obtaining processes.

According to the preferred embodiment of the present invention, each of the footprints is mapped by drawing an outer contour line along the footprint. Figure 2 to 4, 6 and 7 show different foot maps with different outer contour lines. The contour line of the foot is then analyzed to identify the user's foot type, the width of the foot sole and any formation of medial concave arch. For example, a wide sole as shown in Figure 2 indicates the formation of flatfeet, whereas a narrow or disconnected sole as shown in Figure 3 indicates the formation of high arch.

Besides the outer contour line, a first straight line is also drawn, passing through a

point at the edge of heel line horizontally, and a second straight line is drawn perpendicularly to the first straight line and extending vertically from the first straight line to pass through the centre of the index toe. The first straight line can be used as a divider between the inner portion and the outer portion of the footprint to determine the foot alignment. Any deviation or rotation direction of the foot can be determined according to the image size and area distribution between the inner portion and the outer portion of the footprint. The first and second lines are illustrated in the foot maps of Figure 2 to 4, 6 and 7.

- 10 Apart from that, the distribution of the plantar pressure of the foot can also be determined by the image intensity of the footprint. As the plantar pressure of the normal foot is uniformly distributed, the intensity of the ink-filled footprint image shall be the same. Therefore, any significant difference in the image intensity would indicate the uneven distribution of the plantar pressure, as shown in Figure 6 and 7.
- 15 Higher intensity area shown by darker image reveals greater accumulation of pressure.

Furthermore, the formation of abnormal foot shape such as the hallux valgus (bunion) can also be revealed by the foot map. Preferably, a third straight line is drawn perpendicularly to the first straight line, passing through a point at the edge of the base of the hallux. The deviation angle of the hallux, x° , formed between the extending direction of the hallux and the third straight line, as shown in Figure 4, can be measured to analyze the phenomenon of bunion. Any deviation of x° angle which is greater than 20° indicates the formation of bunion.

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Before a desired contour for the insole which shall be worn by the user is determined, the analyzed data is preferably studied and compared with an existing database. The database used for analysis can include the personal characteristics, daily activities as well as health history of the user. The present invention does not intend to limit the format of the database, it can be stored in various suitable formats. Therefore, a

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questionnaire is preferably given to the user in order to obtain all the relevant physical details of the user. Such an analysis is vital in determining an appropriate design of the insole for the particular user.

5 The present invention does not intend to limit the materials used for manufacturing the sole blank (101) as long as the sole blank (101) can be fine-tuned into the desired contour by attaching the padding unit or units (102, 103, 104) thereon. The fine-tuning process is preferably performed on the midsole of the sole blank (101) as shown in Figure 1.

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In accordance with the preferred embodiment of the present invention, the padding unit or units (102, 103, 104) are preferably made of pieces of loops which are commonly available in the name of Velcro and can be commercially obtained. Preferably, the padding unit or units (102, 103, 104) are preferably detachable from
15 the sole blank (101), whereby each piece of loops is having an adhering surface and a hairy surface. The adhering surface is provided with an adhesive which can be a double-sided adhesive tape or glue, enabling the attachment of the adhering surface of the piece of loops onto the hairy surface of another piece of loops.

20 According to the preferred embodiment of the present invention, the size, thickness and location of the padding unit or units (102, 103, 104) are tailored to provide the desired contour for the insole. Illustrated in Figure 5 are the padding units (102, 103, 104) applied which are available in various shapes and sizes based on their usages. For example, the hoof-shaped padding units (102) as shown in Figure 5(a) can be
25 used as heel padding unit, the fan-shaped units (103) as shown in Figure 5(b) can be used as lateral upper padding units, the round-shaped units (104) as shown in Figure 5(c) can be used as fine-tuning or front-tuning padding units. Besides, the round-shaped units (104) can also be applied as upper scaphoid bone padding units. The thickness of this padding unit or units (102, 103, 104) are controlled by the number of
30 padding units (102, 103, 104) applied, wherein the thickness applied is depending on

the desired contour for the insole which is determined according to the needs of the user's body condition. Likewise, the position of the padding units (102, 103, 104) on the sole blank (101) can also be varied. They can be attached on the top surface or the bottom surface of the sole blank (101) according to the desired contour of the insole as well as the preference of the user. The determination of different desired contours for the insole is further described in the Examples. As shown in Figure 1, the round-shaped unit (104) can be attached at the outer portion of the sole blank (101) as a fine-tuning padding unit [104(c)]. It can also be respectively attached on the inner portion or the outer portion of the hoof-shaped padding units (102) as fine-tuning padding units [104(a), 104(b)].

According to the preferred embodiment of the present invention, the method embodied herein further comprises a step of installing the insole into a shoe. According to the preferred embodiment of the present invention, the insole is installed onto the interior bottom of a shoe by a fastening means. This fastening means can be two pieces of hooks, which are commercially known as Velcro.

Based on the different deformities of feet as well as different types of postural imbalance of the user which may lead to various disorders, the types, positions and numbers of padding units (102, 103, 104) applied are adjusted to provide the user a desirable contour for a tailored insole. After the tailored insole is installed into the user's shoe, the malalignment of the feet and postural imbalance of the user's body can be corrected gradually based on the biomechanics concept upon each back and forth movement and footstep of the user. As a result, various disorders caused by malalignment of the feet and postural imbalance of the user's bony structure, such as the outwards rotation of tibia and pelvis as well as the abrasion of knee joints can be overcome. As the soft tissue surrounding the knee joints can be fine-tuned, the muscular tension of tendons and ligaments can also be relieved and the joint aches and swell can thus be reduced.

After a pre-defined period of application of the insole, preferably after three months, the condition of malalignment of the user's feet as well as any posture imbalance of his body shall be mitigated and the same insole's contour may no longer be appropriate to the user's sole. Therefore, yet another preferred embodiment of the present invention discloses a method for producing an orthotic insole which further comprises a step of fine-tuning the contour of the insole by exchanging or removing the padding unit or units (102, 103, 104) according to the condition of the user's bony structure. The contour of the insole shall be re-determined in order to prevent any new imbalances or new points of discomfort after the orthotic insole is worn by the user for the pre-defined period. At set forth in the preceding description, the fine-tuning process can be performed onto the insole, midsole or outsole. Most preferably, the attachment of the fine-tuning units is performed on the midsole of the sole blank (101).

Further embodiment of the present invention is an orthotic insole produced by a method according to any of the preceding embodiments. Preferably, a shoe installed with this orthotic insole also embodied herein. The tailored insole, together with the shoe, is capable of facilitating the user to improve and restore the health of his knees, pelvis as well as spine and thus promoting his physical health.

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The present disclosure includes as contained in the appended claims, as well as that of the foregoing description. Although this invention has been described in its preferred form with a degree of particularity, it is understood that the present disclosure of the preferred form has been made only by way of example and that numerous changes in the details of construction and the combination and arrangements of parts may be resorted to without departing from the scope of the invention.

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EXAMPLE

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Examples are provided below to illustrate different aspects and embodiments of the present invention. These examples are not intended in any way to limit the disclosed invention, which is limited only by the claims.

5 **Example 1**

Figure 6 indicates the accumulation of plantar pressure at the back portion of a sole, as the image intensity is higher at the back portion. Therefore, a hoof-shaped padding unit (102) is attached onto the heel portion of the sole blank (101) as a heel padding unit. When the pressure revealed by the image intensity of the footprint is greater, the
10 number of padding units installed will be greater.

Example 2

When there is formation of inwarding force on a sole, two pieces of side upper padding units (103) can be attached onto the front outer portion of the heel padding unit. Besides, a round-shaped fine-tuning padding unit (104) can be attached between
15 the side upper padding units and the heel padding unit as well as in between the two pieces of side upper padding units. Two third of the fine-tuning padding unit can be attached onto the bottom of the sole whereas one third of it is bended upwards when the insole is installed in a shoe. The number of side upper padding units (103) and the
20 fine-tuning padding units (104) applied can be adjusted according to the size of the shoe.

Example 3

In the formation of outwarding force on a sole, two pieces of side upper padding units
25 (103) can be attached onto the front outer portion of the heel padding unit (102). Besides, a fine-tuning padding unit (104) is attached between the side upper padding units (103). Another fine-tuning padding unit (104) is attached onto the anterior side upper padding units (103) in which one third of this fine-tuning padding unit (104) is bended upwards when the insole is installed in a shoe. The number of side upper
30 padding units (103) and the fine-tuning padding units (104) applied can be adjusted

according to the size of the shoe.

Example 4

5 In the formation of bunion as shown in Figure 4, a piece of front-tuning padding unit (104) is attached onto the front outer portion of the heel padding unit (102). Similarly, one third of the front-tuning padding unit (104) is bended upwards when the insole is installed in a shoe.

Example 5

10 When the force is focused on the front portion of foot as well as the toes portion as shown in Figure 7, the design of padding units shall be inverted as the pressure is different according to the different location of each toe. As shown in Figure 7, when the force is focused on the toe portion, the inner front portion of the sole is pressured, therefore, the padding units shall be attached onto the outer back portion of the sole
15 blank (101). A front-tuning padding unit (104) can be attached onto the heel padding unit (102) of the sole blank (101), with one third of the front-tuning padding unit (104) bending upwards when the insole is installed in a shoe.

Example 6

20 In the formation of bulging scaphoid bone, the inner front portion of the heel padding unit (104) is attached with a upper scaphoid bone padding unit (104).

CLAIMS

1. A method for producing an orthotic insole comprising:
determining plantar pressure and foot alignment of a user by mapping the
5 user's footprints;
analyzing the size, shape and image intensity of the mapped footprints;
determining a desired contour for the insole by comparing the analyzed data
with a database; and
attaching a padding unit or units (102, 103, 104) onto a sole blank (101)
10 according to the desired contour to correct any postural imbalance of the user.
2. A method according to claim 1, wherein the footprints are obtained while the
user is positioned in a correct standing posture.
- 15 3. A method according to claim 1, wherein each of the footprints is mapped by
drawing an outer contour line along the footprint, followed by a first straight
line passing through a point at the edge of heel line horizontally, and a second
straight line perpendicular to the first straight line and extending vertically
from the first straight line to pass through the centre of the index toe.
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4. A method according to claim 3, wherein a third straight line is drawn
perpendicularly to the first straight line, passing through a point at the edge of
the base of the hallux and forming a deviation angle with the extending
direction of the hallux for analyzing the phenomenon of hallux valgus.
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5. A method according to claim 1, wherein the database includes personal
characteristics, daily activities as well as health history of the user.
6. A method according to claim 1, wherein the padding unit or units (102, 103,
30 104) are made of loops.

7. A method according to claim 1, wherein the padding unit or units (102, 103, 104) are detachable from the sole blank (101).
- 5 8. A method according to claim 1 further comprising a step of tailoring the size, thickness and position of the padding unit or units (102, 103, 104) on the sole blank (101) to provide the desired contour for the insole.
9. A method according to claim 1 further comprising a step of installing the
10 insole into a shoe.
10. A method according to claim 1 further comprising a step of fine-tuning the contour of the insole by exchanging or removing the padding unit or units (102, 103, 104) after a pre-defined period of application of the insole.
- 15 11. An orthotic insole produced by a method according to any of the preceding claims.
12. A shoe installed with an orthotic insole according to claim 11.