ii) an undissolved water-soluble permeant disposed therein at least a portion of the plurality of conduits of the matrix, wherein the water-soluble permeant can come in contact with subcutaneous fluid when the bottom surface of the matrix is positioned in fluid communication with the at least one formed pathway.

66. A method for causing the transdermal flux of a permeant into a subject via at least one formed pathway through a skin layer of the subject, comprising:

a) providing a subject having a transdermal permeant administration site, the administration site comprising the at least one formed pathway through a skin layer of the subject;

b) providing a delivery reservoir comprising:

i) a porous non-biodegradable matrix having a bottom surface and defining a plurality of conduits therein the matrix, at least a portion of the plurality of conduits being in communication with the bottom surface; and

ii) an undissolved water-soluble permeant disposed therein at least a portion of the plurality of conduits of the matrix;

c) placing the delivery reservoir in fluid communication with the at least one formed pathway through the skin layer; and

d) maintaining the delivery reservoir in fluid communication with the at least one formed pathway through the skin layer to draw subcutaneous fluid from the subject from the at least one formed pathway and to subsequently transdermally deliver permeant at a desired flux through the at least one formed pathway.

67. The method of Claim 66, wherein step d) further comprises:

dissolving at least a portion of the water-soluble permeant in subcutaneous fluid drawn through the at least one formed pathway; and

transdermally delivering at least a portion of the dissolved permeant at the desired flux through the at least one formed pathway.

68. The method of Claim 66, further comprising dissolving at least a portion of the hydrophilic permeant in subcutaneous fluid obtained from the subject.

69. The method of Claim 67, wherein the transdermal delivery occurs by diffusion through the at least one pathway in the skin of the subject.

70. The method of Claim 66, wherein the delivery reservoir is maintained in fluid communication with the at least one pathway in the skin of the subject for a period of time sufficient to transdermally deliver at least about 60 percent of the permeant through at least one pathway in the skin of a subject.

71. The method of Claim 66, wherein the delivery reservoir is maintained in fluid communication with the at least one pathway in the skin of the subject for a period of time sufficient to transdermally deliver at least about 80 percent of the water soluble permeant through at least one pathway in the skin of a subject.

72. The method of Claim 66, wherein the delivery reservoir is maintained in fluid communication with the at least one formed pathway for an administration period of approximately from 0.1 to 5 hours.

73. The method of Claim 66, wherein the delivery reservoir is maintained in fluid communication with the at least one formed pathway for an administration period of approximately from 5 to 12 hours.

74. The method of Claim 66, wherein the delivery reservoir is maintained in fluid communication with the at least one formed pathway for an administration period of approximately from 12 to 24 hours.

75. The method of Claim 66, wherein the delivery reservoir is maintained in fluid communication with the at least one formed pathway for an administration period of approximately from 24 to 48 hours.

76. The method of Claim 66, wherein the delivery reservoir is maintained in fluid communication with the at least one formed pathway for an administration period of approximately from 12 to 72 hours.

77. The method of Claim 66, further comprising applying an electromotive force to the permeant to enhance the rate of transdermal delivery.

78. The method of Claim 66, wherein the subject is mammalian.

79. The method of Claim 78, wherein the subject is human.

80. The method of Claim 66, wherein the permeant comprises at least one bioactive agent.

81. The method of Claim 80, wherein the permeant comprises a plurality of bioactive agents.

82. The method of Claim 66, wherein the permeant comprises at least one hydrophilic filler.

83. The method of Claim 82, wherein the filler comprises at least one osmotic agent.

84. The method of Claim 82, wherein the filler comprises at least one hygroscopic agent.

85. The method of Claim 84, wherein the hygroscopic agent comprises mannitol.

86. The method of Claim 82, wherein the filler comprises at least one anti-healing agent.

87. The method of Claim 82, wherein the filler is present in an amount, relative to a predetermined amount of bioactive agent, that can provide a predetermined transdermal dosage of bioactive agent.

88. The method of Claim 66, wherein the permeant is present in an amount, relative to a predetermined amount of the solid matrix, that can provide a predetermined rate of transdermal permeant diffusion.

89. The method of Claim 66, wherein the solid matrix comprises a non-biodegradable polymer.

90. The method of Claim 89, wherein the non-biodegradable polymer comprises an ethylene vinyl acetate co-polymer.

91. The method of Claim 66, wherein the delivery reservoir comprises from approximately 10 weight % to approximately 60 weight % matrix.

92. The method of Claim 66, wherein the delivery reservoir comprises from approximately 20 weight % to approximately 40 weight % matrix.

93. The method of Claim 66, wherein the permeant comprises a salt.

94. The method of Claim 80, wherein the bioactive agent comprises hydromorphone.

95. The method of Claim 66, wherein the delivery reservoir comprises a plurality of composite reservoirs in a stacked arrangement.

96. The method of Claim 95, wherein at least two of the plurality of delivery reservoirs comprise a different permeant.

97. The method of Claim 95, wherein each of the plurality of delivery reservoirs comprise a different permeant.

98. The method of Claim 95, wherein the plurality of delivery reservoirs can transdermally deliver at least one permeant at a predetermined rate of delivery over a predetermined period of time.

99. The method of Claim 98, wherein the predetermined rate of delivery remains substantially constant over time.

100. The method of Claim 98, wherein the predetermined rate of delivery is variable over time.

101. A method of transdermal monitoring, comprising steps of:
forming at least one micropore in a biological membrane, and
monitoring an analyte contained in a subcutaneous fluid extracted via the at least one micropore.

102. A transdermal monitoring system, comprising:
a microporation device adapted to form at least one micropore in a biological membrane; and
a monitoring device adapted to monitor an analyte contained in a subcutaneous fluid extracted via the at least one micropore.

ii) an undissolved water-soluble permeant disposed therein at least a portion of the plurality of conduits of the matrix, wherein the water-soluble permeant can come in contact with subcutaneous fluid when the bottom surface of the matrix is positioned in fluid communication with the at least one formed pathway.

66. A method of transdermal monitoring, comprising steps of:
forming at least one micropore in a biological membrane, and
monitoring an analyte contained in a subcutaneous fluid extracted via the at least one micropore.

67. A transdermal monitoring system, comprising:
a microporation device adapted to form at least one micropore in a biological membrane; and
a monitoring device adapted to monitor an analyte contained in a subcutaneous fluid extracted via the at least one micropore.